Community Health Workers: Policy and Practice in National Programmes

A review with selected annotations

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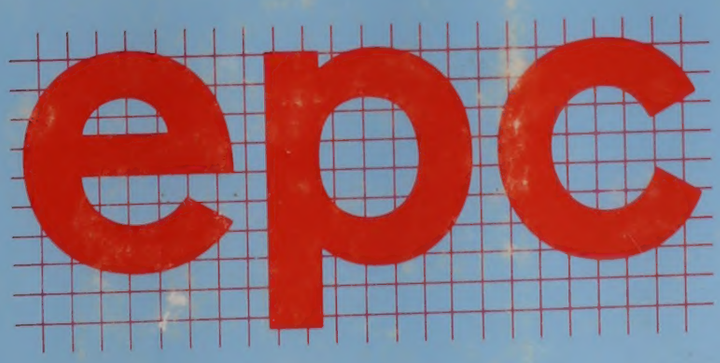

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COMMUNITY HEALTH WORKERS: POLICY AND PRACTICE IN NATIONAL PROGRAMMES

A review with selected annotations

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SUMMARY

Community health workers (CHWs) have become the distinguishing feature of many primary health care (PHC) schemes. CHW programmes expanded during the 1970s and early 1980s as long term evidence for the effectiveness of small-scale programmes grew. However, there is a growing suggesting of a decline in support for CHWs. Criticisms have grown, evaluations of existing programmes have pointed to difficulties in implementation, and a number of reviews have highlighted weaknesses in key areas. Training of CHWs has been suspended in some countries, and fewer than originally planned are being trained in others. In this paper it is argued that although the financial recession has affected support for CHW programmes, there are other reasons why they are now under pressure. On the whole they have been implemented as 'vertical' programmes, against a background of unrealistic expectations, and minimal professional interest. Structural political and economic factors have been neglected. Lessons have not been drawn from the experience of community workers in other sectors such as agriculture and community development. The paper analyses all these issues within a health policy perspective concluding that, unless adjustments are made, CHW programmes will drift towards demise, not because CHWs themselves cannot deliver, but because the support that makes them effective is, in general, absent.

CONTENTS

INTRODUCTION: POLICY AND PRACTICE IN NATIONAL PROGRAMMES

Community health workers (CHWs) have become the distinguishing feature of many primary health care (PHC) schemes. Described as 'bridges' between communities and health services (Ofosu-Amaah 1983), as 'pillars' of health for all (WHO 1987), as 'the cornerstone of PHC' (Bender & Pitkin 1987), as 'partners in PHC' (Ramprasad 1985), as 'avenues for community participation' (Monekosso 1986), community health workers have formidable expectations thrust upon them. The community expects, at least, free treatment and advice when they are ill. Their own Ministry of Health expects its CHW programme to be a living demonstration of its commitment to PHC. The international community expects them to be extenders of health services and promoters of development, 'liberators' not 'lackeys' (Werner 1981).

In spite of the contradictions and difficulties of meeting all these expectations, CHW programmes expanded throughout the 1970's and into the 1980's (Table 1). Long term evidence for the effectiveness of small scale programmes has grown and, in the case of national programmes, a recent review concluded cautiously that large scale programmes are a head start towards health for all (Berman et al 1986). However, there is a growing suggestion of a decline in support. A country wide evaluation of CHWs in Tanzania while commending the commitment of the Ministry of Health to its CHW programme, pointed to the enormous difficulties being faced in implementation (Heggenhougen et al 1987). Criticisms of CHW programmes have grown (Jancloes 1984, Skeet 1984, Bourne 1987, Hammond 1987). Reviews of CHW programmes recognize enormous weaknesses in many key areas (WHO 1987b). Training of CHWs has been suspended in Jamaica and Colombia largely for financial reasons, and in Mozambique because of the disruption of the war. In other countries such as Botswana, fewer than originally envisaged are being trained because of rising costs. In Peru fifty years of experience with health promoters has left little durable trace (Enge 1984). Even China's barefoot doctor programme, once the inspiration to all, has been modified in the 1980s (WHO 1987a).

Is the apparent faltering of support for CHW programmes merely a reaction to the general financial crisis? In this publication it is argued that although recession has affected support for CHW schemes, there are also other reasons

Table 1: SELECTED NATIONAL CHW PROGRAMMES

Country	Programme started [1]	CHW name	Nos CHWs trained [2]	Paid/Vol	Male/Female dominated	Source (see index for additional sources)
Botswana	1973	family welfare educator	609 (1987)	Govt salary	female	Owuor-Omondi et al 1986 EPC 1988/9
Burma	1978	community health worker auxiliary nurse	19,000 (1983)	unpaid allowance	90% male female	Chauls 1982/3
China	1968	barefoot doctor (1984 became rural doctor) rural health aides	643,000 650,000	fee-for-service or community pay salary	26% female	Berman et al 1987 Hsaio 1984 Koplan et al 1985 Rosenthal & Greiner 1982
Colombia	1969	health promoter	5,000	Govt salary	female	EPC 1988/9
Ethiopia	1978	community health agent	4,218 (1984)	community payment	male	Meche et al 1984
India	1977	village health guide	390,700	Govt honorarium	male dominated	Maru 1983 Berman 1987 WHO 1986
Indonesia	1976/7	nutrition leaders village health development workers	1,000,000	volunteers	female	Berman et al 1987 Berman 1984 WHO 1986
Jamaica	1972	community health aides	1,200	Govt salary	female	Berman et al 1987 WHO 1986 Cumper & Vaughan 1985
Nicaragua	1981	brigadistas	41,000	volunteers	female	Scholl 1985 Prieden & Garfield 1987
Peru	1940s	health promoters	5,000	volunteers	male	Berman et al 1986 Enge et al 1984
Sri Lanka	1976	health volunteers	100,000	volunteers	female	EPC 1988/9
Tanzania	1960s	village medical helpers/ community health workers	2,000	volunteers	male	Heggenhougen et al 1987
Thailand	1977	village health volunteers village health communicators	50,000 500,000	volunteers	both male & female	Berman et al 1987 Sudsukh 1982 Hongvivatana 1987
Zambia	1981	village health workers	4,000 (1986)	volunteers	male	Osborne 1983 Twumasi & Freund 1985

1) National programmes are often preceded by a pilot or project in a limited area, or take over a number of non-government projects which may have run for many years.

2) It is often difficult to get reliable information on numbers. Numbers trained may be much higher than numbers actively working.

why CHW programmes are under pressure. On the whole, they have been implemented relatively autocratically as 'vertical' programmes, rather than as part of the PHC approach, against a background of unrealistic expectations and with minimal professional interest. Underlying political and economic issues that affect the operation of CHW programmes have been neglected. Lessons have not been drawn from the experience of community workers in other sectors such as agriculture and community development. In other words, weaknesses stem from the tendency to treat CHW programmes as an end in themselves, and not to consider them as part of wider health manpower plans or within the broader thrust of health policy.

This review focuses on these issues in national CHW programmes. No attempt is made to give a history of the forebears of CHW programmes since this has already been covered (Vaughan 1971, Elliott 1979, Storms 1979). Nor is there any attempt to cover the key issues and problems facing CHW programmes, which have also been reviewed elsewhere (UNICEF-WHO 1980, Ofosu-Amaah 1983, WHO 1983, Vaughan & Walt 1983, Berman et al 1987, WHO 1987b). The main objective here is to place CHW programmes firmly within the context of health policy and to examine issues which have been neglected to the detriment of many programmes.

In the first section two main areas are examined:

the concept of CHWs
evaluations of their effectiveness

In the second section a number of issues highlight the extent to which CHW programmes have been considered in isolation from national health policy. These cover:

the political context in which CHWs work
the experience of other sectors' community workers
support for CHW programmes

Finally, the third section concludes the analysis by looking at the conceptualization, formulation and implementation of community health worker programmes.

In any discussion of CHWs it is important to differentiate between CHWs in national programmes and CHWs in small, non-government programmes. There are

a number of small projects with inputs from donor agencies where community health workers have achieved a great deal (Berman et al 1986). The literature includes examples that date back to the early 1900s. However, the issue since the promotion of Primary Health Care at Alma Ata in 1978 has been the attempt to develop a common, even global concept of a community health worker, which can be implemented nationally for a whole country rather than be limited to chosen communities. The focus of this review is on large-scale CHW programmes where governments have expressed an intent to train CHWs on a national scale.

The concept of a community health worker

The term 'community health worker' encompasses a wide variety of workers who have been in existence for years, ranging from barefoot doctors, feldschers and auxiliary nurses who have had up to several years of training (WHO 1978) to briefly trained primary health workers variously named health promoters, and village health workers, among others. The diversity of names is reflected in a considerable variety of tasks these workers perform. However, what is important is that the earliest programmes were indigenous attempts to meet local needs.

In the 1980s there has been an attempt to include all CHWs in one global concept. In pursuance of the goal Health For All by the Year 2000, through Primary Health Care (WHO 1978), small scale CHW programmes have been converted into large scale programmes. This has often been done hastily, resulting in some loss of flexibility and commitment at the local level leading to a narrower, yet more idealistic, definition of the CHW. This process is clarified if the current definition of the CHW is compared with the reality of many situations.

Although up till recently, most CHWs were described as people who were selected by the community, resident in the community and were from the community, two recent definitions have deliberately eschewed one aspect of this description. A WHO review of national experience in the use of community health workers suggested the community health worker is

> a person from the community who is trained to function in the community in close relationship with the health care system (Ofosu-Amaah 1983).

A later definition suggested that community health workers

> ...are generally local inhabitants given a limited amount of training to provide specific basic health and nutrition services to the members of their surrounding communities. They are expected to remain in their home village or neighbourhood and usually only work part-time as health workers. They may be volunteers or receive a salary. They are generally not, however, civil servants or professional employees of the Ministry of Health (Berman et al 1986).

It is notable that neither of these definitions insist that CHWs are selected by the community. Although this remains a goal of many CHW schemes, experience has shown that community leaders and health services personnel have a disproportionate say in the selection of CHWs (Jobert 1985, Owuor-Omondi 1986).

Indeed, two other aspects of this definition illustrate the gap between ideals and reality facing most CHW programmes. The question of whether CHWs are volunteers or are salaried workers, underlies a deeper concern about accountability. There is often an implicit acceptance that volunteer CHWs demonstrate a level of commitment and service to the community that salaried CHWs do not. It is argued that CHWs' dual allegiance to their communities and to the health services (Flahault 1978) can create conflicts of loyalty if, for example, it is the government that pays their salaries (Vaughan 1980, Bender & Perry 1982). It is worth looking at these two aspects more closely.

Can CHWs be volunteers?

Whether CHWs ought to be volunteers, supported in kind by the community, or paid through community or government funds, has been much debated (De Zoysa & Cole-King 1983, Stinson 1982). Much of the literature tends to imply that volunteers are the ideal to which most CHW schemes aspire, and assumes

> that there is a sufficient pool of willingness, margin of personal security and benevolence, to conduct voluntary social service in the villages, small towns and urban slums (Miles 1985).

The reality is that most national programmes pay their CHWs either a salary

or an honorarium, that almost no examples exist of sustained community financing of CHWs (Gray 1986), and that even NGO's tend to find ways of rewarding their CHWs. Moreover, while there are programmes where CHWs work on a completely voluntary basis, attrition rates are high (Mburu & Boerma 1986) or the few enthusiastic and reliable volunteers are overloaded with tasks from other agencies and sectors (Heaver 1984). A WHO review concludes that there is little evidence that the mobilization of volunteers in national CHW programmes is an effective policy (WHO 1987b).

Why do people volunteer? Studies from industrialized countries such as Britain, where over one-quarter of people over 16 years do some voluntary work, suggest that while volunteers aim to help or benefit others (or the environment or community) there is an assumed benefit to themselves. Self-interest in voluntarism may be enlightened and motivated by the values mentioned above, or even by a 'consciousness of sin' as was said of the nineteenth century middle class in Britain (Pinker 1979), but volunteering is also often seen as an avenue to paid work. This suggests that crucial ingredients in volunteering are money and time: a secure economic and social life makes voluntarism possible, even attractive, and may give volunteers a satisfaction they do not get from paid work (Sheard 1986). In both developing and developed countries the men and women who are involved in voluntary organizations usually volunteer their energies from a secure base.

Where does this leave CHW schemes in less developed countries? Women are in general heavily burdened with daily tasks, with survival or subsistence, particularly poor urban and rural women. There is little time for voluntary work, although there may be considerable reciprocity between neighbours or families at certain times. Religion plays an important part. In Buddhism voluntarism is a positive value. It is possibly no accident that the large health volunteer programmes are in Buddhist countries, Thailand, Burma and Sri Lanka. Cultural respect for, and compliance with, authority such as in Indonesia may lead to voluntarism for different reasons. Status considerations may also be important in motivating volunteers (Dyal Chand & Soni 1987).

It is notable however, that many CHWs are motivated by a desire for

employment. In Sri Lanka health volunteers are mainly young, well-educated women, who have few job opportunities. When asked, the majority say they volunteer in order to give service, but also that they hope that voluntary work will lead to future employment (Perera 1985). Job-seeking motivation in voluntarism has been noted in CHW schemes in Nigeria (Adeniyi & Olaseha 1987) and India (Jaju 1983, Agarwal 1979) where CHWs are paid a small honorarium. Lack of job opportunities helps to explain why men persist as CHWs in some countries: in India even after strong recommendations from the Government that CHWs should be selected from the female population, males predominate nearly ten years after the initiation of the programme.

High attrition rates amongst volunteers, as well as amongst CHWs whose remuneration fails in some way (Meche et al 1984) suggests that a national programme that relies on volunteers or on the community supporting their CHWs is likely to fail. In some countries, both developed and developing, volunteers are perceived by policy-makers as a stop-gap, or an alternative to government expenditure. The exceptions, such as Indonesia and Burma (although the Burmese programme only began in 1979, and has hardly been reported on), may have ideological and cultural dimensions missing elsewhere. True voluntarism organized by the state is inherently contradictory in most societies, although the state may help to support relatively autonomous voluntary organizations.

Are CHWs government employees?

The second question relates to the position of CHWs vis a vis the Ministry of Health. If the definition above were strictly applied (that is CHWs are not civil servants or employed by Ministries of Health) it would exclude many existing CHW schemes. In many countries it is the Ministry of Health that pays the CHW salary or honorarium, even if this is through another agency (the district council in Zimbabwe, for example). In as much as Ministries have the power to withdraw financial support, it could be argued these CHWs are government employees or even civil servants, although many of the normal rights of government employees such as a pension, are often absent. Also CHWs cannot usually be transferred to another community. In many countries however, it is clear that the CHWs identify closely with the Ministry of Health, and the organizational structure of the Ministry.

If it is not the Ministry of Health which pays for the CHW programme, who does? The Government of India has had to give a direct grant to the State Governments for the CHW honorarium to ensure continuance of the programme, since most States denied it budget priority. Many rural communities are too poor to sustain regular payments to CHWs, and the hopes that the Chinese barefoot doctor-commune model (the funding for which changed markedly in the 1980s) could be exported to other countries have been questioned. In the harsh financial realities of the 1980s many states are trying to extract themselves from being responsible for paying for CHW schemes (Cumper & Vaughan 1985) but passing on the burden for payment to communities has not so far been successful (Gray 1986).

In summary the main features of community health workers are that they are local people and are not expected to move away from the communities they serve. They are preferably women, but some programmes are dominated by men. They receive a very short training, and, unlike other health professionals, they are unlikely to have the opportunity to be promoted to higher positions, or to be transferred to another part of the country. In most national programmes they are generally paid a salary or honorarium and are identified closely with the health services. Finally, they mostly act as extenders of health services rather than as development or change agents.

Evaluation of CHW programmes

Another way of refining the definition of CHWs is to look at what they do: their tasks and the functions they serve in the communities in which they work. Here the crucial question is, how effective are they?

In most national programmes CHWs have similar responsibilities. They are usually expected to concentrate on visiting homes with pregnant women or children under five. These visits are often educative (persuading mothers to go to immunization clinics, talking about aspects of nutrition, hygiene, family planning), but may include measures such as taking sputum tests, using arm bands to measure suspected malnutrition cases or weighing children. They also follow up tuberculosis or leprosy cases. CHWs also often work part-time in clinics, and may do any of the above tasks as well as registering of

patients and dispensing of drugs. In a few national programmes CHWs have limited supplies of drugs and sometimes, contraceptives, which they distribute. There is less variation in tasks in national programmes than in small-scale schemes where supervision is usually closer and professional interests not so threatened.

It is striking that, although several evaluations of either CHW performance or CHW programmes have been carried out, how little can be concluded from their findings about the effectiveness of CHWs. Partly this is due to the methodological difficulties of carrying out such studies and the financial implications of rigorous designs. But blind spots are also evident. For example, very little consideration has been given to the costs of such programmes. One exception is the review of six CHW programmes by Berman et al (1987) which attempted to quantify their cost-effectiveness.

Designing scientific evaluation approaches that satisfy the quantitative standards of epidemiologists as well as the qualitative demands of social scientists is problematic. While the effectiveness of a CHW programme might be best assessed by changes in mortality and disease prevalence in the community, it is notoriously difficult to design evaluations that can confidently demonstrate causal relationships between CHW inputs and decreases in mortality or morbidity.

Measuring outcomes such as changes in nutrition (Berggren 1973), provision of malaria prophylaxis (Spencer et al 1987), percentage of children immunized (Bhattacharji et al 1986) is sometimes attempted but is difficult. A careful evaluation needs fairly large numbers, and matched control populations which are not always easy to find. Measuring such outcomes depends on records being available or observational visits. Although records often exist for immunizations (through health services or child growth charts) CHW records are usually simple, and are often incomplete and inaccurate. Visits for observation are time-consuming and carry the risk of bias because they have been arranged in advance. Furthermore, since most CHW tasks are preventive, promotive or educational, an estimate of their efficiency should reflect these skills: in changing behaviour (not only attitudes) in relation to childhood diarrhoea and the use of oral rehydration solutions, for example.

Such tasks do not lend themselves to easy quantitative assessment.

Monitoring processes in CHW schemes is what many evaluations attempt: numbers of home visits made, continuing education courses attended, supervisory support available, stocks of drugs or medical kits and so on (Osborne 1983). While the answers are often a valuable tool for identifying weaknesses in programmes, they are seldom able to give any indication of the quality of such encounters.

Most evaluations take a relatively limited brief, usually looking at the aims of the programme under study, to see how far these are being met. Even national programmes evaluations are small scale, and take place in one or two areas rather than across the country. Table 2 synthesises a number of evaluations, looking at objectives, methods used and main conclusions.

Methodological difficulties have implications for findings. None of the studies shown in Table 2 were able to provide conclusive evidence for any effect CHWs have on health status. Several show that CHWs have helped to extend coverage (Owuor-Omondi et al 1986, Berman 1984, Marchione 1984, Sudsukh 1982). Measurable outcomes of CHW activities are in general inconclusive: Marchione (1984) showed only one change could be clearly attributed to CHWs (the attendance of mothers at family planning clinics). Indeed some evaluations suggest that CHWs are rather inactive (Sudsukh 1982, Enge et al 1984, Meche et al 1984). This is often said to be due to lack of supervision or drug supplies, a weakness identified in almost all the evaluations.

Not many of the studies assess satisfactorily community expectations. Heggenhougen et al (1987) provide some colourful vignettes of CHW relationships with village people, and the Indian evaluation (Maru 1983) claims that community members and health service staff were satisfied with their CHWs. Who in the community is served by the CHW would throw light on community satisfaction, but findings differ. Quadeer (1985) suggests that CHWs focus on the better-off members of the community, while Maru (1983) points out that a male dominated CHW programme is likely to have difficulty reaching its target population of women and children. Community workers

Table 2: EVALUATIONS OF NATIONAL PROGRAMMES

INDIA National CHW scheme launched 1977 (village health guides)

Numbers trained: 390,717 (1986)

a) Source: Maru 1983 (evaluation carried out June-July 1979)

OBJECTIVES	METHODOLOGY	MAIN CONCLUSIONS
To assess:	Teams visited 156 Primary Health Centres in 2 areas	Common diseases being treated, although insufficient attention given to promotive and preventive activities
The range and quality of services provided by CHWs	Questionnaires to CHWs; community members; community leaders; and health service staff	90% CHWs male, therefore not meeting needs of women and children, although serving all economic strata
Who did CHWs serve?		Tendency for CHWs to be co-opted by bureaucracy was real, and community mobilization was weak
Did CHWs attend the most common health problems of the rural population?		Most community members and most health service staff were satisfied with CHWs
Could CHWs mobilize the population?		
Did health service personnel value CHWs?		

b) Source: Quadeer 1985 (evaluation carried out 1983/4)

OBJECTIVES	METHODOLOGY	MAIN CONCLUSIONS
How well was the scheme performing given the social and economic realities of rural areas?	Study done in one block of 39,642 people, 34 villages	Motivation of CHWs based on increase in social or political position, and opportunities to augment honoraria by doing private practice
By exploring: Social/economic stratification Links between CHW and village strata Links between village strata Links with health service personnel	Socio-economic surveys, a few intensive (1-2 months in a village) Observation and interviews	CHWs 'honoured' the better off and ignored the poor

BOTSWANA national CHW scheme launched 1973 (family welfare educators)

Numbers trained: 650 (1987)

a) Source: Bennett et al 1980 (evaluation carried out September 1980)

OBJECTIVES	METHODOLOGY	MAIN CONCLUSIONS
Does the CHW programme conform with the concept of PHC?	57 CHWs selected around the country	Uniforms, salary and clinic attachment camouflaged community role of the CHW
Does it meet its objectives?	Interviews with CHWs, villagers and community leaders	Too many CHWs in urban or large village clinics - should be more community based
	Household surveys Time, motion studies Health post activities reviewed	Health committees weak, should take over some aspects of supervision (record-keeping)
		Training too centralized

b) Source: Owuor-Omondi et al 1986 (evaluation carried out during 1986)

OBJECTIVES	METHODOLOGY	MAIN CONCLUSIONS
To strengthen research capability (CHW study part of a larger health status study).	66 CHWs selected by cluster sampling	CHWs provide an important and necessary link between the health services and the community
To establish how far the CHW programme is contributing to PHC by looking at:- Mobilization of community members Relevance of training Selection process Relationship between CHWs and other sectors Supervision	Interviews Questionnaires Medical examination Laboratory tests Participatory observation Focus group discussion Review of records	The quality of the CHWs performance needs improving (eg CHWs need help in systematizing home visits)
		Supervision needs clarifying and strengthening

ETHIOPIA national scheme launched 1978 (community health agents)

Numbers trained: 1218 (1983)

Source: Meche et al 1984 (evaluation carried out 1983)

OBJECTIVES	METHODOLOGY	MAIN CONCLUSIONS
To collect information on activities performed by CHWs	58 CHWs in 3 regions selected randomly in each region	CHWs serving 3 different types of mass organization: peasant associations, service cooperatives and producers cooperative all with different methods of remuneration (eg 75% peasants' associations provided no remuneration at all)
To identify the extent of support provided by communities and health services to CHWs	Questionnaires Interviews Review of records Observation	Drugs supplied irregularly, continuing education weak
To provide data of CHW drop-out rates		High drop-out rates

INDONESIA Central Java province: scheme launched 1976/78 (2 types of kaders)

Numbers trained: 1,000,000 (1986)

Source: Berman 1984 (evaluation carried out 1981-83)

OBJECTIVES	METHODOLOGY	MAIN CONCLUSIONS
To establish whether the CHW programme - increased equity - increased coverage	2 sub-districts of 50,000 population each, collecting data from rural health centres, sub-centres and CHWs	CHW services achieve greater coverage than clinic services
	Household survey	However CHWs had no impact on the rates of use for clinic-based services
		CHW services reach proportionately more poor households and individuals than do clinics

JAMAICA National scheme launched 1972 (community health aides)

Numbers trained: 1300 (1984)

Source: Marchione 1984 (evaluation carried out 1975-1980)

OBJECTIVES

Evaluation on 2 levels:

1) Matters internal to CHW programme:
how well were CHWs deployed in relation to need?
how well did they perform their daily tasks?
how well were they received by the community?
how well were they trained, supervised, co-ordinated within the health team?

2) Social processes and goals external to CHW programme:
political, social and economic changes that affected developmental goals

METHODOLOGY

Questionnaires to 110 CHWs, 20 of whom followed up

200 at risk households (300/200 more households the following years)

Analysis of the structural context of the country through policy documents etc

MAIN CONCLUSIONS

1000 CHWs deployed in previously underserved rural areas was a gain (although distorted by patronage politics of Jamaica's 2-party system).

Measurable outcomes in general inconclusive (only one change could be clearly attributed to the programme ie attendance of mothers at family planning clinics).

The political environment changed, from self-reliant development policies towards economic stabilization programmes imposed as loan conditions. This change affected the CHW programme.

DOMINICAN REPUBLIC National scheme started 1978 (health promoters)

Numbers trained: 1112

Source: MacCorquodale 1982

OBJECTIVES	METHODOLOGY	MAIN CONCLUSIONS
To compare the characteristics of more effective CHWs with less effective CHWs	48 CHWs randomly selected out of 1112 Household records/interviews Immunization rates of under 5s (DPT and measles) No. couples practicing contraception Questionnaire to CHWs Built into an index of effectiveness	No significant difference in mean age, marital status, or mean level of educational attainment between the more or less effective CHWs A higher degree of job satisfaction was apparent on the part of the more effective health workers

PERU Attempts to standardize long-standing health promoter schemes in 1970's

Numbers trained: c.5000

Source: Bnge et al 1984

OBJECTIVES	METHODOLOGY	MAIN CONCLUSIONS
To assess adequacy of: selection process, training, supervision, support, acceptability of promoter to community, attrition rates, responsiveness of programme to health needs	8 (of 17) regions selected, 2 areas in each Interviews with: 2345 households 284 promoters MoH personnel trainers etc. Questionnaires, interviews, field observation	Coverage by health promoters of ante-natal, family planning activities low (7-12%: 1%) Health related activities low (10-40 per month) Attrition rates 20-50% Supervision, support very weak Promoters cannot be dealt with in isolation to MoH policy

TANZANIA Many schemes since 1960, national scheme formulated 1983

Numbers trained: c. 2000

Source: Heggenhougen et al 1987

OBJECTIVES	METHODOLOGY	MAIN CONCLUSIONS
To describe the current functions of CHWs	Multiple approaches used. Interviews in 23 districts with: 344 CHWs	Evaluation part of process leading to reformulation of policy
To point to strengths and weaknesses	654 health workers 87 village leaders	CHWs appreciated by villagers and health staff although their effectiveness is unclear
To make recommendations	Survey of 445 households and 1053 CHWs through 71 district medical officers	Issues needing resolution: drugs, quality of care, supervision etc.
	Questionnaires, interviews, field observation	

THAILAND National scheme launched 1977

Numbers trained: Over 500,000 village health communicators, and 50,000 village health volunteers

Source: Sudsukh 1982

OBJECTIVES	METHODOLOGY	MAIN CONCLUSIONS
To identify improvements in: The functioning of CHWs in the community	5 sub-districts randomly selected in 4 regions	Both VHC and VHV somewhat inactive in community
Training of CHWs	Interviews in 99 villages with 99 VHVs and 192 VHCs	Training well planned but VHVs/VHCs unable to use half of what they learned
Other operational support mechanisms	Questionnaires, and interviews	Support very limited Drug supplies inadequate

themselves complain of lack of support (Sudsukh 1982, Meche 1984) and not surprisingly, MacCorquodale (1982) found a higher degree of satisfaction on the part of the more effective CHWs.

Communities' satisfaction with CHWs remains an open question. For most communities, curative and emergency care are first priorities, and where CHWs cannot provide such help they may not be valued (Jaju 1983, Connolly & Dunn 1986). Certainly experience in Mali and Senegal suggests that failures by communities to find local funding for PHC and CHWs were due less to institutional blockages than to 'a perception by the population that benefits are not commensurate with what they would have to pay' (Gray 1986). In Papua New Guinea many communities were not even aware of what their CHWs did (Frankel 1984).

There have also been a number of small evaluations of non-government programmes. One study from India attempted to assess the work performance of part-time CHWs (Bhattacharji et al 1986). Other surveys have tried to determine how communities use CHWs or how CHWs divide their work between curative and preventive tasks. (Jacobson et al 1987, Chandra et al 1980, Gupta et al 1984). Several studies have found that where CHWs have access to medicines dispensing them becomes a major activity. The cry by CHWs and communities for regular supplies of medicines is common to many programmes (Heggenhougen et al 1987, Kaseje 1987).

In conclusion rigorous evaluations of CHW programmes are few and far between. This is partly because many of the programmes have not been in place for long. But more importantly, there are enormous methodological problems of research design and logistics to carrying out an evaluation of a CHW programme.

The political context of CHW programmes

For many the most important role for the CHW is as change-agent, as the person through which communities become involved in health, and thereby take control of their own health. Freire's ideas of empowering communities through an educational process, for example, had a powerful effect on many working in rural development (Freire 1972). This concept of

'conscientization' coupled with experiences in non-formal education and community development led some to argue that community health workers were much more than mere community-based health service deliverers. They were agents of change, catalysts in a development process who were challenging the medical profession's monopoly interest in health care (Rifkin 1978).

The notion of the CHW in a national programme being an agent of change (not only of individual but also of collective behaviour) has, however, remained highly idealistic. There has been little discussion about the extent of social and economic differentiation in the communities in which CHWs work. With a few exceptions, (Jobert 1985, Heggenhougen 1984, Werner 1981, Williams & Satato 1980, Stark 1985, Cham et al 1987) a striking omission in the literature on community health workers is any discussion of the role of the state or structural conflict, inequality, class or professional dissonance.

Focusing narrowly, most CHW literature ignores the structural distribution of wealth and power, or how health policies entrench patterns of resource distribution or who gets what services. Yet the context within which CHWs work is all-important. A comparison of health policy development in India and China, for example, shows clearly that the policy to train barefoot doctors was an indigenous idea, and fitted into the organizational structures of rural China. In India the policy to train CHWs was imported and CHWs were dropped into an administrative vacuum (Chen 1987). Jobert (1985) goes further to suggest that the evolution of the CHW programme in India is an example of the contradictions of participation policies in a populist regime:

> Political awakening of the rural masses makes it absolutely necessary to take action so as to re-direct a portion of state interventions for their benefit. But the determining influence of the dominant classes, in both political apparatuses and intermediate level bureaucracy ... tends to divert most of the resources ... while inevitable reforms are constantly delayed.

Because the structural context was not considered in the development of the CHW programme in India, health planners failed to appreciate how great an impact the high rate of unemployment in Indian villages would have on the selection process (Agarwal 1979).

Similarly, Chauls (1983) has argued that CHWs in Burma, are 'volunteers who work' because they are part of a supportive political ideology and structure.

> In Burma the voluntary health workers 'belong' to the community more than to the government health system. Both the village (as represented by the Village People's Council) and the workers themselves see the locus of power at the community rather than at the rural health centre. The health system trains and supervises. But the community selects and pays (Chauls 1983).

At the opposite extreme, there are documented cases of CHWs being killed or disappearing in repressive and oppressive states (Heggenhougen 1984, Stark 1985). Even where the state is not blatantly repressive, however, there are examples of where conflict has led to the murder of CHWs. Chowdhury (1981) describes the death of a CHW who began to expose corrupt practices in a village, where free government medicine was being peddled at high profit.

In a South African example of a CHW scheme that failed to reach its participatory objectives, those involved asked whether there is any chance of success

> in a politically, economically and socially oppressive country ... Perhaps it is inevitable that most such workers will represent yet another strand in the extensive web of control that officials already have over poor villagers (Hammond & Buch 1984).

A few case studies have illustrated the sorts of conflicts that occur at local levels, affecting the CHWs work if not putting their lives at risk. Williams and Satato (1980) showed how a PHC programme in Indonesia started enthusiastically training two types of voluntary village health workers and raising money to provide a rudimentary service at village level. Problems arose when the traditional village authority was challenged (in a small way) by the health committee, and because traditional social relationships- between men and women and between those with land and those without - did not change. The latter in both groups were excluded from all decision-making and planning. Furthermore the health cadres were co-opted into maintaining 'law and order' by agreeing to join the home guards, a village level para-military organization which is ambivalently regarded by villagers. Other

limitations were put on the project's success by lack of interest and support at the regional level.

Several examples from India emphasise the strains upon CHWs who are faced with caste as well as social class differentiation

> 'The wealthier families prefer to call the dai to attend deliveries when there are difficulties ... They do not want to mix with the low-caste women and prefer to treat the dai and health worker as their personal hand-maiden rather than as professionals dispensing a meaningful service (Dyal Chand & Soni 1987).

One study in Madhya Pradesh concludes that the prevailing network of linkages increased and strengthened the hold of the elite, absorbing and distorting the CHW programme.

> The poor who were the supposed beneficiaries had no say in either the decision-making or the running of the programme (Quadeer 1985).

Another PHC project, just outside Bombay, which had run for over ten years and successfully trained CHWs had to close down because of local opposition:

> Despite the fact that the poor and even some of the leaders accepted the project services the local power structure dominated by the richer and more powerful leaders, joined hands with the government health services in open hostility and demanded that the project leave the area, handing its assets over to them. Their object was achieved after threats and show of open violence to the project staff (Antia 1985).

In other countries similar tensions have been reported. Twumasi and Freund (1985) describe a community health worker in Zambia in conflict with the established local political leaders. Sources of tension revolved around accusations of favouritism in providing services, and overstepping of authority in trying to set up village health committees. The high visibility of the CHW was also regarded negatively by the local politicians.

These conflicts pertain to CHW programmes in particular settings. But in the wider context of primary health care, there are also intense debates about

the political and economic motivations of policy makers. Although the humanitarian thrust of the PHC approach to shift resources towards primary health care, has not been questioned, the ideology behind it, has been. Navarro (1984) for example, is critical of the avoidance of recognition of class and power relations in the Alma Ata documents. Ugalde (1985) has argued that ideologically primary health care (and community health workers) are basically the provision of health care for the poor, and second-class care at that.

> From its beginning primary health care was designed for the peasants and the urban poor. Health committees and community participation were conceived as the instruments of legitimization for the low quality of care given by primary health programs (Ugalde 1985).

Other sectors' experience with community workers

The health sector has not been the only sector to introduce community based workers. Participatory policies focusing on the community have been tested out in a variety of social programmes since the 1940s. Education, agriculture, housing, social work and community development programmes have all struggled to achieve equitable distribution, reduce costs and develop basic services that meet people's needs over the past decade (Macpherson 1982, Midgley et al 1986). Community participation has become a central theme of many of these programmes. In most cases front-line workers have been seen as the link between the professional staff and the community (Brekelbaum 1984) and the mechanism through which community participation takes place (Paul 1987). The interpretation of what 'link' means in this context is also variable: for some it is a mechanism through which community demands are expressed, and aspirations met. For others it is a mechanism through which support and information are both sought and given. The first derives from development goals, the second from service goals.

What is surprising is that while there are many different sorts of community-based workers, there is a dearth of comparative experience reported in the health literature. One rare paper compares extension workers from the three sectors in Botswana (Fortmann 1985) and Foster (1982) draws lessons for PHC from community development, regretting the fact that most PHC practitioners 'assume that the medical profession has developed an innovative new approach

to development'. Ugalde (1985) makes a similar point in relation to participation emphasising the health sector's disregard of the failures of community development in Latin America.

In exploring approaches to using front-line workers in community development and agriculture, two themes are pursued: the ideological roots of the programmes and rationale for using community based workers.

Community development workers

The community development approach was promoted and supported by heavy inputs of aid from the first world (the United States and Britain in particular), to third world countries after the second world war. Similar strategies were used by the French in Francophone countries, under the animation rurale approach to grass-root development (Macdonald 1986). First used by the British Colonial Office 'community development' was proposed as a way of helping the British African colonies prepare for independence by improving local government capabilities and developing their economies (Colonial Office 1958). A number of modest national community development programmes launched in Africa in the 1950's established village development committees, self-help projects, literacy and vocational training programmes (Govt. of Ghana 1964). The massive community development programme in India

> was intended to galvanize millions of villagers all over the country to articulate their 'felt' needs and to participate in programmes of social and economic development. The efforts and resources of the people and the state were to be combined for this purpose (Madan 1987).

Most community development programmes included development agents of some sort, part of whose role was to initiate or encourage community participation where it was not forthcoming, 'by the use of techniques for arousing and stimulating it ...' (Colonial Office 1958). Usually paid by government, they were trained as multi-purpose workers and sent to villages to assist in the development process at village level. The sorts of skills they were expected to have were in communications, motivation,and organisation, with the ability to draw on technicians from specific sectors to help them implement projects. They were usually males, and their main function was to try to improve the lot of the downtrodden and less fortunate and to 'modernize' the community

(Holdcroft 1978). Several observers have pointed to differing ideological rationale behind the financing of community development programmes in the third world. Contrary to officially stated aims, Macpherson suggest that community development was a British attempt to 'maximise the extension and growth of colonial penetration and control' (1982). Holdcroft says that for the United States of America it was because of the perceived threat of revolution in South-East Asia after the 'loss' of China to the Communists, that the community development programme was promoted in India after independence (1978). In Latin America Ugalde (1985) argues that community development programmes were introduced into Latin America to generate much needed support from the rural masses for the liberal democracies and authoritarian regimes of the region.

By the early 1970s scepticism about the community development approach abounded. One of its protagonists expressed his disillusion

> my overall feeling is one of sadness that so much community development effort has on the whole, resulted in so little actual betterment ... (quoted by Foster 1982).

Three broad lessons from the community development experience have relevance for CHW programmes. First, participation proved to be an elusive goal, and if it occurred, rarely included the poorest segments of rural society. Village development workers, who were often secondary school leavers, tended to identify with the traditional village elite to whom most of the benefits of the project accrued. Hence they reinforced paternalistic and centralist traditions (Holdcroft 1978).

Second, national decision-makers were naive in believing that community development was an apolitical approach to rural development. Basic conflicts of class, land ownership, urban dominance were pervasive and directly influenced, and often diverted, the work of community workers (Manghezi 1976).

Third, the move from local or 'pilot' project to regional or national programmes was shown to be fraught with difficulties. Sussman (1980) describes how a successful project in India, which specifically concentrated

on organizational mechanisms in order to ensure replicability, nevertheless was diluted when it attempted to achieve high coverage. The very points that made the programme viable and successful (good supply and support systems, coordination between sectors, flexibility and responsiveness to local needs) were lost in the eagerness to extend the programme to a much larger population. Inherent conflicts with the bureaucracy which was generally unsympathetic to community development aims (for example real involvement of communities in decision making) were containable at the local level, but not when the programme was extended further. Today the community development programme in India seeks to maximize the benefits of government activities rather than promote community involvement (Madan 1987).

Agricultural extension workers

Again, the agricultural extension approach has largely been a post-second world war phenomenon. Early extension activities were mainly associated with export crops only (for example, rubber, sugar, tea and coffee) with little attention to traditional food crops. After independence, many countries broadened the emphasis of agricultural extension to include peasant farmers, and promoted the agricultural extension worker (AEW) as a community based worker who could advise and assist farmers in new methods leading to higher crop production, higher per capita incomes and increased foreign exchange reserves (Swanson 1984). However traditional extension methods focused mainly on richer farmers, assuming that they were more able to take the risk inherent in innovation. The theory was that their increased wealth and example would trickle down to the poorer members of the community (Garforth 1982).

One debate in the agricultural extension literature has particular relevance for CHWs: it emphasises technical training, the mechanisms for supervision. As a result of criticisms of the traditional methods used for training and supervising agricultural extension workers, a system of training and visit (T & V) was devised in 1977 (Benor, Harrison and Baxter 1984). T & V is based on four principles:

singleness of purpose (AEWs have a purely advisory role. They do not write reports, supply seeds, fertilizers or credit)

concentration on key tasks (AEWs learn a couple of key tasks or messages every two weeks in a day of training to ensure relevance of work and not to overburden them with more information than they can handle)

regular and predictable schedules (AEWs have a rigid schedule of visits to contact farmers, training and supervision, usually based on a two week rotation)

face-to-face communication and feedback (AEWs are the link between the farmers and the agricultural sector).

There has been much debate about the benefits of T & V (Howell 1982, 1983) one of several criticisms being that it is very expensive (Moore 1984) since experience shows that T & V is only successful when all the above mutually reinforcing elements are simultaneously implemented (Heaver 1984). However there may well be lessons for community health worker schemes. One attempt to look at the implications of T & V for population, health and nutrition workers concluded that although there are inherent differences between health and agriculture, some aspects of T & V could be usefully adapted (Heaver 1984).

Heaver compares four programmes in India, the Philippines (one government and one NGO) and Indonesia, which use CHWs (both paid and volunteers). He scores each programme for managerial effectiveness, and from an analysis of performance and resource uses in each programme he illustrates a basic paradox of volunteer systems: that they are often adopted for their cheapness, yet without close support and supervision, which can be prohibitively expensive, they are ineffective. A tightly-managed outreach system which employs smaller numbers of paid workers may be more expensive but more cost-effective. Selective targeting of households by CHWs, task concentration, and more in-service training, are all lessons from T & V that could benefit CHW schemes (Heaver 1984).

Agricultural extension remains an important policy in most countries, and debates about improving programmes cover issues familiar to those concerned with health worker programmes. There are lessons to be learned from technical analyses such as Heaver's (1984) but also from debates about motivation, for example. Not only what motivates AEWs, with concomitant

issues of recruitment, training, selection, supervision and career structure (Fortmann 1985), but also what motivates farmers to adopt innovations (Garforth 1982) and whether richer farmers continue to be favoured by the T & V system (Feder, Slade and Sundaram 1984). Fortmann's (1985) comparison of agricultural demonstrators, assistant community development officers and family welfare educators in Botswana concluded that the other two sectors could learn from the experience in health. She found that the family welfare educators, who are health workers, and who were selected by their communities (unlike the other cadres for whom the decisions 'to hire, fire, transfer, promote or send for training are all made at the centre') were more acceptable to their communities and were working better than the other cadres. Of course it could be argued that FWEs were more acceptable because of the nature of the services they offered too. Familiar themes repeat themselves from community development: participation is elusive, politics are endemic, and local experience is difficult to replicate on a large scale.

In summary, although the rationale for their front-line workers had different origins in the three sectors discussed, there are strikingly familiar themes in all three. The pursuit of participation and community involvement is common to all and remains elusive to all; the political environment is, on the whole, neglected, a weakness pinpointed in all three areas; and the dilemma of expanding from small to national coverage remains a predicament for all.

Support for CHW programmes

The role of the professionals

Reviewing the literature it is noticeable that it has usually been progressive medical professionals who have promoted the idea of CHWs. With some notable exceptions (such as David Werner) it has been doctors who have instigated and implemented successful health schemes training CHWS (eg. Behrhorst, Aroles, Chowdhury, Antia) and it is medical professionals who have persuaded policy makers and politicians to support CHW programmes. The involvement of the nursing profession and other primary health care workers in planning CHW schemes has been minimal (EPC 1988/9), although it is nurses who most often train and supervise CHWs sometimes joined by health

inspectors, and health assistants.

Indeed there is some evidence to suggest that CHW programmes were often not initially welcomed by the nursing profession.

> Trained nursing staff became quite agitated when the community began to call the health aides the 'new nurses' and began to demand more health services than the aides were trained or allowed to provide (Marchione 1984).

Certainly CHWs often themselves identify with, and aspire to become, nurses (Cumper & Vaughan 1985). Because nurses were not involved in planning for CHW programmes they have been slow to understand their broad role in PHC and have tended to use CHWs as useful extra pairs of hands in the clinics, as nurse aides rather than community health workers (Bennett et al 1980).

This is indicative of a much wider malaise whereby the nursing profession has traditionally been seen as of low status by the medical profession, and has until recently been relegated to a back seat in the promotion of primary health care in spite of the fact that in many third world countries it is nurses who are the majority of front-line workers providing PHC services.

Lack of consultation of nurses in PHC policy formulation and implementation has been exacerbated, however, by trends within the profession itself, which has been seeking in the last two decades to professionalize, to increase the number of nurse graduates, to improve management capabilities, and so on. As international communication and professional exchange has increased, so many third world countries have been drawn into importing models of nursing training and care which are not appropriate or relevant to local conditions (Masson 1978). Professionalization increases hierarchical working relationships, job-differentiation, status, and aspirations, all of which run counter to ideas in PHC and the role of CHWs in the community. It is not surprising therefore, that many CHWs aspire to be like their nearest role models, that they distance themselves from their communities and that they prefer working in clinics to making home visits. Status admiration, however, does not obviate conflict. The potential for role strain in the PHC team is illustrated by Nichter's (1986) comparative analysis of two situations in

India and Sri Lanka. Conflicts arose over skills, competence and status between doctors and different types of nurses and other health professionals. Medical officers tended 'to underplay the skills of field staff and jealously guard medical supplies'. Auxiliary nurse midwives felt threatened by CHWs (1986). Indeed it is increasingly argued that it is urgent to retrain clinic-based nursing staff both in attitudes and outreach, and that this is a more attainable objective than expecting CHWs to meet communities health needs (Hammond 1987).

External agencies support for CHWs

Although CHW programmes have existed throughout the century, on the whole they operated in isolation. The greatest burgeoning of programmes has been since Alma Ata. There is little doubt that much of the impetus for CHW programme implementation has come from the pressure and financial support from both the international agencies, especially WHO and UNICEF in their promotion of PHC, and bi-lateral organisations such as the US Agency for International Development (USAID). Indeed it has been argued that many countries have used the introduction of a CHW programme as a substitute for a comprehensive policy on PHC which they are unwilling or unable to implement (Vaughan & Walt 1983). Both Gray (1986) and Justice (1986) refer to strong promotional and financial pressure from donors on recipient governments. In a review of health policy in Mali, Chabot and Bremmer (1988) suggest that international agencies have played an important part in keeping community based services going in the face of government inertia and professional disinterest. They go further and question the value of such aid, given the lack of support from government and health staff.

> The health personnel ... see the donor as an important potential to add to their meagre salary. As long as the donor is willing to 'subsidize' their income through all sorts of allowances, the work runs quite smoothly. But when these allowances diminish or disappear a certain passivity, or even resistance, becomes apparent.

Although there have been isolated criticisms of the roles of international or voluntary agencies in the less developed world, (Briscoe 1979) few have stopped to ask whether support for CHW schemes is justified. One view is that supporting CHW schemes may be not only useless but harmful because of

the dependency it creates on the outside donor (Ramprasad 1985). Communities become unwilling to do anything without receiving some payment for it. Marchione (1984) suggests that the Jamaican government received funding for its primary care efforts from external sources, and that this achieved short term goals at the expense of nationwide development goals. One project for example, depended heavily on foreign professional management, outside medical workers, and absorbed a large proportion of local resources by calling on all the community health aides for the whole island. Without UNICEF's support for training and kits for CHW programmes in many African countries it is extremely doubtful that they would continue to function.

In conclusion, many national CHW programmes receive external funding (especially for training, and sometimes for drugs or evaluations). The big question is if those inputs were removed, how committed would governments be to supporting CHWs?

Conclusions on the development of CHW programmes

What conclusions can be drawn from this review of the literature?

Conceptualization of CHW programmes

The shift towards primary health care which culminated in Alma Ata was the product of successful experimentation with community-oriented health care as well as the recognition of the failures of past systems and campaigns (Newell 1987). Medical professionals and social scientists coincided in a conceptual re-thinking about health. The doctors concentrated on expansion of (improved) services, the social scientists drew attention to community resources that could be tapped (lay workers, traditional practitioners), and culture and belief systems that had to be considered. Economists pointed out the low cost of CHW programmes relative to other forms of health care. What Alma Ata did was start a process of promotion and information exchange to accelerate change in health policy forcing Ministries of Health and aid agencies to re-think their priorities. Thus, although many countries had themselves introduced a series of policies to improve health systems before 1978, the thrust for change came from the international community, especially WHO and UNICEF.

The energy with which PHC was promoted, and the moral force behind the arguments for PHC, obliged countries to demonstrate they were doing something about it. One of the easiest ways of doing this was to introduce a community health worker programme, especially given the constraints on Ministries of Health which were responsible for implementing the primary health care approach.

Armed with the manual produced by WHO (1977) which each country was to adapt to their own situation, policy makers began planning community health worker programmes. On the surface it was extremely attractive. CHWs were seen as a legitimate means of extending services to larger populations. The feasibility of such programmes had already been demonstrated, and the costs involved appeared to be low.

There is little doubt that in some countries CHW programmes were seen as the cheapest, easiest and most visible way to demonstrate a commitment to PHC. Some argued initially that a different allocation of resources rather than extra funds were needed (Golladay and Liese 1979) and it was only later that real account was taken of the potential costs involved. There was also considerable underestimation of the conflict involved in reallocation of resources, the structural inequalities within communities and between urban and rural populations.

Furthermore, international support (which included some financial assistance) was forthcoming, and national support at Ministry of Health level was assured since CHWs threatened no-one in the hierarchy (except perhaps the junior nurses who were not consulted).

However, many of these simple expectations were misconceived. The move to introduce CHWs came primarily from doctors. Those most closely involved in the implementation of the programme, the nurses, were not involved in planning, and like other health professionals had CHWs thrust upon them. In many cases their form of resistance to this imposition was to distort the role of CHWs to suit their ends. When the new schemes were introduced there was seldom any attempt to re-define the functions or capabilities of other health workers who would be working with CHWs, which has led to conflicts in

some countries.

Enthusiasm and haste triumphed over planning. Some Ministries of Health assumed volunteers would be available and willing to take on CHW roles, without thinking much about attrition rates, supplies of medicines, support or supervision. Others assumed communities would support CHWs through agricultural surpluses, or other collective means without investigating the feasibility of this. Still others took on the burden of paying a minimum wage or honorarium, assuming communities or district councils would take this over after an initial period. When this did not occur, numbers of CHWs trained had to be cut defeating the purpose of their being close to, and responsible for only a few households.

CHW programmes were conceived as part of the PHC move towards equity: but existing structural inequalities or resource allocation patterns were seldom explicitly challenged, and in Ministries of Health in particular, while goodwill about community self-reliance and involvement abounds, most policy makers have felt helpless in pursuing the goal of community involvement. It is likely that it would not even appear on the policy agenda were it not for external pressure. Where there has been genuine concern with development of community participation Ministries of Health have come into conflict with other sector Ministries over the boundaries of what constitute valid activities for CHWs and what do not. CHWs themselves are members of highly stratified communities, in which interests and demands are conflicting: they cannot be impartial umpires in the struggle for the consumption of scarce resources.

Finally it is clear that planning of tasks was done in a very rudimentary way, with some dissonance over roles: CHWs want drugs and emergency services for their communities; professionals are reluctant to give CHWs too many curative skills. Many CHWs are unclear as to what sorts of targets they should be meeting at community level, which homes they should be visiting, and how to keep up momentum and interest, especially if they have only preventive or educational tasks.

The distance between policy intent and practice

Most national CHW programmes are characterized by top-down planning with local authorities little involved. Indeed, new structures, such as village health committees have been introduced to support community health workers in communities which already have many existing structures. No wonder then that most villages are 'littered with the carcasses of moribund committees and organizations' (Fortmann 1983).

The striking impression gained from reviewing what has been written about CHWs is the extent of policy drift. Although many evaluations have been carried out, reports sit on shelves and neither get discussed nor acted upon. Sometimes this is because policy makers are sceptical of the results, or distrust the findings or motivations of the evaluators. As has been discussed, evaluating CHW programmes is methodologically difficult. If recommendations imply extra resources, or major policy changes, or affect large numbers of health workers they may also be ignored. CHWs are simply not high on Ministry of Health agendas, are not seen as a priority policy. CHWs are expedient: they make a good impression on international and national government policy makers, but they are not valued enough to withstand the force of other demands. They are the first cadre to be cut or to not receive supplies or continuing education if resources are in short supply. Often donor agencies are propping up or disguising weak national resolve.

Given this situation, what is the future for CHW programmes?

First, although the economic climate is hostile, and even the poorest countries have been forced into accepting adjustment policies inimical to improving health, the basic rationale for CHWs remains immutable. Austerity should not be the excuse for abandoning PHC or equity. In fact it may be of particular importance in such circumstances in order to counter balance increasing impoverishment. There is thus a good case for donor agencies to continue to assist CHW programmes but with greater inputs from Ministries of Health, in setting standards for supervision, introducing training for supervision, and thinking about incentives schemes to improve supervision.

Second, the evidence that CHWs can be useful, effective and can extend

coverage is clear. What is needed is more thought about reward systems, work scheduling, realistic targeting and better support and supervision. Better management does not necessarily involve higher costs. Lessons should be learned from other sectors which have front-line workers.

Third, it is naive to assume that CHWs in national programmes can play highly political roles in societies which are essentially non-democratic. Even in democratic societies however, it is probably more realistic to accept that in most cases CHWs are part of the health service, and will therefore have strong loyalties towards it. This does against the community, nor that they cannot mobilize and express demands on behalf of the community. All health workers at community level need training in communication and facilitating skills to help them work with communities, building up community structures and responsibilities, encouraging participation. The PHC approach is essentially democratic and rigid professional hierarchies threaten it.

Finally, if such adjustments are not made, the uncomfortable conclusion of this review is that CHW programmes will drift towards demise, drowning in exhortation, not because CHWs themselves cannot deliver but because the support that makes them effective is in general, absent.

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> "Our review of the literature suggests there is ample evidence that CHWs in small-scale well-managed projects can be effective. In other words, the potential contribution of the CHW approach has been demonstrated." (p443).

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SELECTED ANNOTATIONS

The annotations in this section include a few relevant references from the community development and agricultural extension literature. The majority, however, focus on national community health worker programmes. Among these annotations are a few which address general questions, such as whether CHWs are inhibitors or promoters of primary health care. Most of the annotations focus on relatively large-scale, national programmes in particular countries, where governments have professed a policy interest in training CHWs. However, these are often initially run as pilot projects, and a number of the references cover a CHW programme in only one part of the country concerned. Besides national programmes, there are many non-government organizations which have introduced or supported small-scale CHW schemes in particular areas. These are not, in general, covered in the annotations for this bibliography, although exception has been made in a few instances.

Agarwal A (1979) Barefoot doctors: symptom not cure. Nature 280; 716-18.

This is a well-argued critique of the Janata government's policy in 1977 to train CHWs, which also reviews one of the early evaluations of the programme. Agarwal stresses that health planners failed to appreciate "how great an impact the high rate of unemployment in Indian villages would have on the selection process. Though the CHW honorarium was kept deliberately small to attract only motivated people, even this sum of money has aroused the interest of many unemployed young educated people, particularly sons and nephews of dominant farmers". He goes on to say that the evaluation of CHWs revealed that many of the CHWs thought that the health programme was basically a job-creation scheme and that with such experience they would probably get employment in the primary health centre itself.

In general, Agarwal concludes that in India most CHWs are "pill-pushers" and not "community mobilizers", commenting that "... the dominant social groups would certainly raise serious obstacles if any of them were ever to make any attempt to mobilize people". In his view, CHWs are "... an extension of the

medical bureaucracy, a kind of second-grade village technocrat ...". This is a well-written paper that raises many of the issues that have proved to be problems well into the 1980s.

Bang A and Patel AJ (1982) Health care: which way to go. Medico Friend Circle. Pune, India.

This a collection of articles looking at different and often controversial issues in health care in India. Medico Friend Circle is a group of socialist and politically-aware health workers (mainly doctors), and the areas covered in this book include water supplies, pharmaceuticals, oral rehydration solutions, traditional medicine, dai training, and the training and utilization of community health workers.

Among the contributions, of particular note are those by: Rani Bang, who writes about women in health care, as nurses and health workers, addressing the problems they face being exploited both professionally and sexually. There is a reprint of David Werner's article on village health workers as lackeys or liberators. Rushikesh Maru writes about the community health worker scheme in India and how it developed. Binayek Sen also writes about the CHW scheme; he strongly criticises its planning omissions considering the problems of training where there are no adequate trainers and selection where there is no village level democracy. The author fears that the inevitable failure of the scheme will be blamed on the ideology and not, as it should be, on the ill-conceived implementation plans.

See also KS Jayarao and AJ Patel, 1986.

Benor D, Harrison JQ and Baxter (1984) Agricultural extension - The training and visit system. Washington: World Bank.

Daniel Benor was the founder of what is now generally known as the Training and Visit (T & V system) in 1977. Since then it has been adopted by many governments especially in South Asia, with considerable World Bank support.

This is the standard short text on the T and V system. It begins by looking at some of the general problems of traditional extension: objectives were very vague, there was little organization and no schedules, guidelines for workers did not exist, nor were there ties with research or specialized staff. Extension workers were operating in far too big an area. The T and V system sets out to reform this, demanding a unification of the extension service, linking it with research and setting out a rigid schedule for workers who are exclusively dealing in advice. The book covers the main features of the system, including organization, coverage, supervision and incentives; it discusses briefly the personnel required at each level. The final chapter looks at evaluation. While not directly related to community health workers, there are many issues which are similar and could be instructive for CHW programmes.

Berman PA, Gwatkin DR and Burger SE (1987) Community-based health workers: head start or false start towards Health for All? (Paper produced for the World Bank 1986). Social Science and Medicine 25 5; 443-459.

Community health worker programmes have been shown to be fairly effective on a small scale basis. In this study of 6 programmes the authors have chosen to look at large scale programmes. The countries studied are China, Indonesia, India, Peru, Thailand and Jamaica, chosen for the availability of data. The study looks particularly at the tasks performed, the quality of care, coverage and equity, cost efficiency and health impact. It suggests that whereas the coverage and equity of the CHW programmes were better than that of clinic based services, and provided at a lower cost, there were shortfalls in the quality of care and no evidence for any large scale health impact. Programmes were liable to slip into curative care which reduced the impact on overall health. The authors conclude that CHW programmes have the capacity to provide low-cost, equitable and accessible health care, but to do so they will require more commitment in terms of resources for support, supervision and appropriate training. The study emphasizes the problems of "scaling up" and makes many interesting points. It is one of the few studies which attempts to look at the costs of CHW programmes.

Berman P (1984) Village health workers in Java, Indonesia: coverage and equity. Social Science and Medicine 19 4; 411-422.

Berman begins by outlining the historical background to the use of village health workers (VHWs) for PHC in Indonesia, and the place of health centres and village clinics within the PHC infrastructure. He discusses the advantages and disadvantages of VHWs in general and describes the programme in Java. Focusing on two sub-districts in Central Java, one with many VHWs and one with only a few, Berman examines issues of coverage and equity, by looking at the population whose needs are known or can be estimated, and the extent to which those needs are being met according to socio-economic class. Small numbers and other methodological problems make it difficult to draw conclusions but the research suggests that services provided by village health workers (who are volunteers) achieve significantly higher levels of population coverage than similar clinic-based services. In most cases, VHWs show no bias towards better-off clients and they may favour poorer beneficiaries.

P Bourne (1987) Beyond the barefoot doctor: the unfulfilled promise of primary health care. Development International, May/June; 32-35.

In a grand dismissive gesture the current President of the American Association for World Health suggests that the barefoot doctors "who set out to bring 'health to all' in developing nations have all but come and gone, leaving in their wake a 'hodge podge' of global campaigns to meet health needs". In this provocative paper the author suggests that from Alma Ata in 1978 to AIDs in 1987, primary health care has been an unfulfilled promise. Bourne argues that financial constraints and changing situations in many third world countries mean that health care needs now confronting ministries of health are quite different. Ministries are therefore increasingly looking to the private sector and sources other than government for funding health care. Apart from ideological exceptions, he suggests that health care will come ultimately from a steady expansion of various mostly private health care mechanisms and a growth in national economies which will lead to an

increasing number of people working in a cash economy. Although there is plenty to argue with in this lively paper, it makes points that need to be considered.

Brekelbaum T (1984) The use of paraprofessionals in rural development. Community Development Journal 19 4; 232-245.

As a result of studying 68 projects using paraprofessionals in rural development the author suggests that many of the problems that arise in the projects are similar. This is despite the disparity in characteristics between workers in health, agriculture and community development. She identifies 8 basic functions of paraprofessionals, discusses the relationship between them and their professional colleagues and gives reasons (eg cost-effectiveness) why paraprofessionals have been used.

She then examines more closely the selection, training, remuneration and supervision of paraprofessionals. Under selection she gives an overview of the projects quoting some rather unrealistic "ideal" criteria. She suggests training is usually totally inadequate to prepare the worker for the tasks s/he is supposed to perform and emphasises the need for non-technical skills to be taught (eg communication, ability to motivate). She stresses the need for trainers and supervisors to be taught their skills too. Paraprofessionals are very dependent on support and supervision, but the effectiveness of this support is in its turn dependent on the relationship between the people involved, workloads and the perceptions of each others' roles. The issues surrounding financial remuneration are discussed briefly and their implications for accountability mentioned. Despite her criticisms the author concludes that the use of paraprofessionals is viable, providing the problems in the above areas are addressed.

Chabot J and Waddington C (1987) Primary health care is not cheap: a case study from Guinea Bissau. International Journal of Health Services 17 3; 387-409.

The main source of primary health care in Guinea Bissau is the village health unit, each serving one village only and staffed by volunteer vilage health workers (VHWs) and traditional birth attendants (TBAs). This paper describes the slow building of primary health care in two areas of the country. The authors emphasize how important it is to begin new projects on a small scale, and to expand them only through a learning process. The project differs from other CHW programmes in that a peripatetic team of nurse and social worker first approaches a village to build a health unit. Having built a unit, the team stays in the village, trains VHWs and TBAs (from surrounding villages too) and sets up a collective fund for drugs. For a village of 200 households, the aim is to train 8 - 10 VHWs and 3 - 7 TBAs. VHWs are taught to treat 6 symptoms, but also to see the importance of preventive activities. After the team leaves the village (after 4 - 6 months), the village committee remains responsible for maintaining the health unit and administering the drug fund. An attempt to evaluate the programme is made, by looking at effectiveness and at some of the programme costs. The authors suggest the overall influence of the programme is probably modest. An interesting paper, which would be strengthened by more current information.

Cham K, MacCormack C, Touray A, Baldeh S (1987) Social organization and political factionalism: PHC in the Gambia. Health Policy and Planning 2 3; 214-226.

In this investigation of primary health care in the Gambia, a multi-disciplinary team analysed the principles of social organization and the process of factionalism that sometimes disrupts health programmes. Gambian villages are organized on principles of caste, class, age, religion, gender and ranked order of wives. The resulting stratification contributes to political factionalism. There was one village health worker in each of the thirty-three villages visited, most of whom had been in post for longer than two years, and some for five years. Most VHWs were related to the headman,

and were of the dominant lineage in the village. Their major conflict occurred over support: only one VHW was receiving a dependable stipend, and a few had received help on their farms, but usually not at the crucial time. Twenty-one per cent of VHWs had mismanaged village funds. All villages had traditional midwives as well, also mostly aristocrats, who received payment directly from families at delivery. The authors compare the different villages and their social organization, concluding that there is no one characteristic that makes a village function well or badly. They make a number of practical suggestions on how to strengthen village organizations such as development committees, and call for improved support and co-ordination from health and extension services.

Chauls DS (1982-83) Volunteers who work: the community health care project in Burma. International Quarterly of Community Health Education 3 3; 249-266.

Burma has a large scale - almost national - programme of voluntary community health workers (CHWs) and auxiliary midwives (AMs) which seems to be working well. The author describes the programme and then examines the factors which have contributed to its success. He begins by mentioning briefly the culture in Burma, based as it is on Buddhism, and socialist political ideology. The existing health care system and the way the CHWs and AMs fit into it is described, with details on selection and training, and the vast number of tasks the training course is supposed to cover. Supervision is by salaried nurse midwives who visit at least twice a month. Remuneration is by the community: the Village People's Councils are involved both in selecting workers and organizing any remuneration and drugs supplies. In asking why the programme works the author suggests a number of factors. Buddhist traditions makes voluntary work respectable, and the political support for the system is high. The degree of community participation is considerable, both in its extent and in its nature; the CHWs are identified with the community who are responsible for their selection and remuneration. Supervision is frequent and health staff close clinics three days per week to go into the villages. Another reason the programme works is because it focuses on what villagers consider important: drugs to cure illness, babies

to be born healthy. CHWs dispense drugs on a large scale, and enjoy this role. This is an interesting article, but one which leaves some questions of detail unanswered.

Chen DCY and Tan YK (1981) Primary Health Care among the Iban of Sarawak. Tropical and Geographical Medicine 33 4; 403-9.

Although peninsular Malaysia is very well served with health services, both Sabah and Sarawak remain underserved. This is largely due to a thinly distributed population, and terrain that makes communications difficult even by boat. In recognition of these problems a pilot project was set up to test the value of Village Health Aides who would work part-time and serve an area within which the Aide could be reached in 30 minutes. This article describes the existing PHC services, explaining their shortcomings in coverage and mentioning the traditional facilities used in the remoter areas. It also describes how the village health aides were selected and trained, what their roles are and how they are supervised. It is claimed that the programme has reduced the number of seriously ill patients, as referral is much quicker, and increased the number of villages with a clean water supply. Although this experience sounds optimistic, little is said about the problems or difficulties encountered in implementing the scheme.

Claquin P (1981) Private health care providers in rural Bangladesh. Social Science and Medicine 15B; 153-157.

In rural Bangladesh most of the population has little access to government sponsored health care. However, there is a wealth of alternative services, both qualified and unqualified allopathic, homoeopathic, Ayurvedic, Unani and spiritual. This paper looks at the distribution of these practitioners, at their education, mode of practice, fees and patient load. It is suggested that these practitioners be brought into the government system and utilized as an alternative to training new CHWs. This paper is based on data obtained through interviews from health care providers only, and not from the

recipients. Claquin's main question seems to be: why train CHWs when there are already many people providing health services in the community?

See Feldman 1983 for an alternative view.

Cumper GC and Vaughan JP (1985) Community health aides at the crossroads. World Health Forum 6 4; 365-7.

Community health aides (CHAs) were incorporated into PHC teams in Jamaica in the late 1970s after a number of successful earlier pilot studies. The aim was to improve utilization of health services and encourage preventive health practices. CHAs were supposed to live in the areas from which they came but this residential requirement was dropped due to a number of pressures, not least from those CHAs who wished to retain their job when they moved out of the area. Most CHAs were female. By 1983 the Ministry of Health was employing 1273 - but none were trained after this because they have remained in their jobs and financial resources for new posts have not been available. CHAs are salaried and have promotional prospects but over time have changed their functions. From being largely community based, they have become essentially based in health centres. By 1983, the time spent by CHAs on family planning and nutrition, their main community tasks, had fallen significantly. The authors highlight the fact that CHAs tend to identify with nurses, and through their trade union emphasize this association, claiming to be nurse auxiliaries. They also note that at present no legal recognition or protection exists for community health aides and the financial implications of 'professionalizing' CHAs have hardly been considered.

Dyal Chand A and Soni MI (1987) The Pachod Health Programme. In: Fernandez and Tandon Participatory Research and Evaluation: experiments in research as a process of liberation. **Indian Social Institute, New Delhi.**

This is a useful optimistic antidote to other papers which describe the national CHW scheme in India in somewhat negative terms. The Pachod Health Programme, a non-government scheme, involved communities in the decision

making process from the outset, although the way they have participated has changed over the years as they became more confident and aware. The authors describe many of the problems they faced, focusing on the scheme to train local midwives (dais). Some of these problems are discussed and analysed, as are the implications of some of the decisions. The programme is evaluated continuously, by constant discussion. Results are presented not only in terms of quantitative change in birth and death rates but also in terms of social change: the dynamics of the community and self confidence of the workers. See also A Dyal Chand and M Ibrahim Soni, Evaluations in primary health care: a case study from India for another view of the Pachod experiment, which focuses on participatory evaluation. In: D Morley et al (1983) Practising health for all, Oxford University Press, Oxford.

Enge KT et al (1984) Evaluation: Health Promoter Programme, MOH, Peru Vols I and II. Unpublished evaluation report, Management Sciences for Health, Boston, Mass.

This detailed evaluation of the health promoter programme in Peru was carried out by external evaluators, with Peruvian inputs. It begins with a description of the history of the programme which started over 50 years ago in Puno with the training of "rijchari" (awakeners). From then on, many different efforts have been introduced by government departments, non-governmental and international organizations leading to a plethora of types of health promoter. In the 1970s national norms for maternal and child health services and a curriculum for TBAs and promoters was developed, and the norms were revised in 1983. But even in 1983 it was noted that little uniformity existed. The total number of promoters actively working is unknown. Although 5000 have been trained since the 1970s, attrition rates vary between 10% and 50%. The evaluators ask why, given a long history, did all these attempts fade away with so little durable trace? The results from the evaluation undertaken in 16 areas in 8 selected regions of the country, and covering 283 promoters, suggest that health promoters are relatively inactive, express a clear preference for curative work, and are inadequately supported and supervised, although all these findings varied from area to area. This detailed evaluation shows that CHW programmes cannot be

considered in isolation from primary health care, and overall policies on health.

Faruqee R (1982) Health, nutrition and family planning in India: a survey of experiments and special projects. Staff Working Paper, 507; World Bank, Washington.

Small scale projects are usually said to be more successful than larger ones, but it is important to realize that (a) small projects often have little or no accurate data about their real achievements, (b) their coverage in the face of reality is negligible and (c) they are usually a focus of attention and run by charismatic and enthusiastic leaders. In view of this the problems of scaling up should not be ignored. However there are lessons to be learnt from small projects, and this document discusses some of them, in the context of 14 small scale projects. The author suggests 7 lessons: (1) It is important that health services be integrated rather than unipurpose. (2) Community participation is vital, although it needs careful handling if it is not going to be abused by the elite. Of especial importance is community participation at the planning stage. (3) Paraprofessionals can provide good appropriate health care. (4) Effective training and supervision is essential. (5) Emphasis needs to be placed on outreach work. (6) The cost is inevitably going to be higher than in sponsored projects, and (7) Evaluation is currently focused on output rather than impact. Monitoring systems are needed. The paper includes tables for comparison and a brief outline sketch of each project.

Although the data for most of the projects is based on reports and documents rather than on first-hand information and the criteria for selecting the 14 projects mean that the sample is not representative, this is still a useful background document.

Feder G, Slade RJ and Sundaram AK (1984) The training and visit system: an analysis of operations and effects. Discussion paper no 14. Agricultural Administration Unit. Overseas Development Institute, London.

This discussion paper looks at some of the effects and operational issues surrounding the T and V system of agricultural extension, based on experience acquired at the Haryana project in North India. It begins by examining the supply and demand of agricultural extension advice, relating that to the number of visits made, the sort of farmers visited, the seasonal variation, and the age of the project. It then asks questions about the extension agents as sources of information in relation to other sources eg. radio, other farmers. This in turn is related to the different types of farmers. The paper concludes that the supply of extension is adequate but that the demand is seasonal, as extension work is traditionally geared to irrigated crops. There is therefore a tendency to concentrate on larger farmers who rely more on extension workers for advice than on radio. The paper does not address the implications of this inherently inequitable distribution, despite the fact that the T and V system seeks to deal with inequality.

Feldman S (1983) The use of private health care providers in rural Bangladesh: a response to Claquin. Social Science and Medicine 17 23; 1887-1896.

This excellent paper follows on from Claquin's study (see annotation). The author suggests that Claquin should have focused much more on the utilization of services rather than the existence of different types of services in rural areas. Feldmen argues that the gross disparities in social class and income that exist in Bangladesh are further complicated by gender-role differences, and affect access to all types of health care. A deeper understanding is needed of the differentiation that is present in the utilization of existing health services. Using data collected by personal interviews with health practitioners, patients and community members of 2 villages in Comilla District the author gives an in-depth analysis of the utilization of health facilities, discussing each against the socio-political-economic background. In the light of this assessment the author concludes that the development of

plans such as the palli-chikitshok (rural doctor) training programme serves only to exacerbate the disparity in class distinction. The programme, supported by the Government of Bangladesh and the US Agency for International Development, introduced a one-year, full-time, curative, technically oriented training for rural doctors to increase access of rural dwellers to allopathic care. Feldman argues, on the basis of some careful research, that the pattern of health care utilization that emerges is biased against women, both as practitioners and as recipients of health care and serves to solidify rural class structures.

Fortmann L (1985) Factors affecting agricultural and other rural extension services in Botswana. Agricultural Administration **18 1; 13-23.**

Within the context of rural extension work in Botswana there are three cadres of village-level personnel: the agricultural demonstrator (AD), the assistant community development worker (ACDW) and the family welfare educator (FWE). This article looks at and compares the quality of service provided by all three. The data is based on information gathered by university students living in the villages and is thus both objective and subjective, assessing the quantity and quality of the contacts each cadre made with members of the community. FWE's who are health workers attached to health facilities, fared far better than either of the others in this evaluation. For example the percentage of contacts between each worker and the villages varied enormously: over 70% of villagers were never contacted by the AD or ACDO, whereas 58% of villagers had been contacted by the FWE. Low morale among ADs and ACDOs demonstrated by high vacancy rates for positions, and unrealistic goals for the number of communities expected to be covered, leads the author to conclude that FWEs recruited from and living in, the community are more likely to satisfy their expectations because their jobs are clearly described, and they cover limited geographical areas. Comparisons are made in the differences in recruitment, training, contact:worker ratio, field support and communications with the conclusion that weaknesses are due to structure and administration of extension services rather than to extension workers themselves.

Foster GM (1982) Community development and primary health care: their conceptual similarities. Medical Anthropology 6 3; 183-195.

Foster argues that the goals in community development and primary health care are remarkably similar, yet health experts have tended to ignore the lessons from community development. The paper compares first some of the assumptions, programme goals and implementation techniques shared by both community development and primary health care. For example Foster argues that both have been viewed by many planners as devices to meet the minimal needs of local communities at the least cost. Multipurpose activities, community participation, mobilization of community resources for self-reliance and local level workers are shared goals and implementing strategies in both sectors. From this analysis he goes on to draw out the lessons of the community development experience, its misconceptions and bureaucratic pitfalls, and applies these to primary health care programmes. This is a valuable comparison of two different approaches to rural development and health.

Frankel S (1984) Peripheral health workers are central to PHC: lessons from Papua New Guinea's Aid Posts. Social Science and Medicine 19 3; 279-290.

The Aid Post Orderlies (APOs) in Papua New Guinea are a well recognised part of the health service. Initial training is well established and medical supplies are seldom in short supply. However, although many of the APOs work very well giving effective care, the system is not meeting its potential. This article focuses on the motivation of the individual APO and his relationship with the community. It appears that the community have little idea about what to expect from the APO. The author looks at all the influences that affect the performance of APOs, both at village and district/national level. He suggests that the best way to overcome many of the problems of motivation is to involve the community far more in the decision-making process regarding their individual Aid Posts.

Frieden T and Garfield R (1987) Popular participation in health in Nicaragua. Health Policy and Planning 2 2; 162-170.

Since the revolution in Nicaragua in 1979 the Ministry of Health has achieved remarkable success in organizing community efforts. This paper describes the evolving system for community participation in health and analyses the elements that have contributed to its development. One of the first attempts to mobilize people was through the literacy crusade, when close to 100,000 volunteers were trained in literacy methods and sent throughout the country to teach reading and writing to illiterate peasants. Of them, 24,000 were given training in basic health concepts. A section of the Ministry of Health went on to institutionalize a system of multiplicadores and brigadistas, although it has been modified over the years. Initially new volunteers were trained each year, but later they became permanent rather than temporary workers. They are not paid, but work closely with health facilities, and receive incentives in the way of drugs, scholarships, badges and diplomas. Unfortunately the war waged by the Contras has taken its toll - over 40 brigadistas have been killed and many more kidnapped in a war which has made the health system a target. A useful short paper on an alternative example in community participation.

Garforth C (1982) Reaching the rural poor: a review of extension strategies and methods. In Jones GE and Rolls MJ (eds) Progress in Rural and Community Development Vol 1, John Wiley and Sons Ltd, UK.

Garforth traces the shift in emphasis in rural development policies towards the poor in the early 1970s to the growing acknowledgement that traditional extension models were biased towards progressive and better-off people in the rural population. He goes on to discuss a number of different strategies employed in agriculture, health and nutrition education and family planning to help focus programmes on the rural poor. These include the development and testing of appropriate technologies, focusing on groups instead of individuals, using theatre and other means of communicating ideas, involving clients in the design and implementation of programmes, and employing paraprofessionals. Examples of all these are given, in both agricultural

extension and health programmes. It is notable how similar are the preoccupations in all the sectors, and the lesson extracted for extension work that attempts to benefit the rural poor is relevant for health nutrition and family planning programmes too: straightforward communication of technical information to rural people is not tenable: extension has to be a collaborative process, offering genuine opportunities for technical, economic and social development.

Government of Somali Democratic Republic, UNICEF, WHO (1986) Review of primary health care. North-West Region, Somali Democratic Republic.

This is a glossy, well-illustrated report of one evaluation of PHC carried out jointly by the Somali Ministry of Health, WHO and UNICEF. It includes a section on community health workers. The PHC project which is supported by the two international agencies covers the Northwest and Awdal regions of Somalia. The communities in this area range from settled villages to pastoralist, mobile groups. The programme started in 1982, and by 1986 105 CHWs had been trained. CHWs were appointed and remunerated by communities. Only 30 CHWs were interviewed for this study. They claimed to work 5 or 6 days per week, on average 6 hours per day. CHWs' knowledge levels (about signs of dehydration, immunization schedules and pneumonia symptoms) were high, and supervisory visits almost one a month. All CHWs received some remuneration, although irregularly. CHWs are males, in their late twenties, with a few years of education, previously farmers. They had been working for 3 years at the time of this evaluation, with enthusiasm and satisfaction. Unfortunately, since this report was published, war, migration and general insecurity have threatened the programme.

Griffiths J and Lirhunde CB (1983) Partnership between people and professionals in selecting community health workers. Community Development Journal 18 2; 139-145.

A request to assist a training institute for community nurses in improving their selection process brought up many other issues. Originally thought to

be mainly a technical problem it soon became evident that there were some fundamental issues concerned with the implementation of health care policies that had to be considered at the same time. This article describes a training institute in Kenya, examines the selection procedures used to recruit community nurses, and the problems that became apparent in the process of selection. The authors then discuss the changes suggested, and the establishment of community participation in the selection process, noting that, while many health professionals may be willing to accept participation when it is confined to CHWs, they may be more reluctant when it comes to the selection of other health workers. They give some guidelines as to how a selection process should be scrutinized to ascertain whether it contains participative goals and briefly discuss the relationship between selection, training and performance, giving some objectives for what can be expected from selection processes.

Gupta SC, Dabral SB, Maheshwari BB, Shrotriya V, Mehrotra DK, Singh G (1984) Medical care activities of village health guides. An assessment. Indian Journal of Public Health 28 3; 128 - 131.

This is a report of a short study covering 90 village health guides (VHGs) from as many villages, 360 community members and 81 paramedical and medical staff, using observation and interview methods. The evaluators found that well over half (67%) of the community members did not know of the VHG scheme. Of those who knew VHGs, they claimed they both gave medicines and injections and 25% complained that they charged a fee for this service. The main advice sought from VHGs was for the treatment of fever, cough and gastrointestinal disorders, and VHGs registered beteween 6-30 new cases per week, seeing an average of about 17 cases per week. Seventy percent of VHGs referred 2-3 patients per week to primary health centre staff. This is a very short paper, which does not give enough statistical information to judge the conclusion of the authors that in general the performance of the VHG is better than earlier studies. There is also no discussion of issues such as VHGs giving injections, which they are not trained to do.

Harpham T, Lusty T and Vaughan P (eds) (1988) Urban community health workers, Ch 13 in: In the Shadow of the City. Oxford: Oxford University Press.

Community health workers are increasingly being introduced into relatively small-scale urban projects, and face many of the same constraints as their rural counterparts. These and other issues are covered in this chapter which briefly introduces some of the discussion around the utilization of CHWs in urban areas, and goes on to give two case studies: one in Bangkok, run by the municipal authority and one in Davao City, Philippines, started by the Christian Family Movement. The urban health volunteers in Thailand are chosen by the community committee and approved on the basis of one per 20-30 families. They basically have health education tasks, but may also get involved in environmental sanitation and prevention of drug abuse. In the Philippines, the volunteer CHW is called a Katiwala, and he or she is selected by a general assembly of the community. Katiwalas are responsible for 30-50 families, and devote 1-2 hours, two or three times per week, to this voluntary work. They have some simple curative skills, and make home visits to treat simple complaints like cough and fever, but mostly do promotive activities and act as links with representatives of other health agencies. After these brief descriptions, the chapter concludes with some general points about the role of urban CHWs.

For other papers on urban CHWs see:

1) Stanton B, Clemens J, Koblinsky M, Khair T (1985) The urban volunteer programme in Dhaka: a community based primary health care and research initiative. Tropical and Geographical Medicine 37; 183-7.

2) UNICEF, Quito (1983) Primary health care in slum areas of Guayaquil, Ecuador. Assignment Children 63/64; 115-31.

3) Griffith MH (1983) Urban health workers in search of a role. Future 1; 43-47.

Heaver R (1984) Adapting the training and visit system for family planning, health and nutrition programs. Staff Working Paper, 662: World Bank; Washington.

This is a good paper which draws on the training and visit system (T and V) of agricultural extension as a successful managerial approach for geographically scattered outreach programmes. It explores whether T and V can be adapted to meet the technical, managerial and behavioural needs of health and nutrition programmes. The paper falls into three parts. The first theoretical section compares extension and health projects, looking at tasks, messages, visiting, training and supervision. A useful two pages summarise the projects' similarities and differences and raises issues for discussion. The second section is based on practice, and compares perfomance in several programmes in India, the Philippines and Indonesia. Attention is particularly paid to the key variable of human resources for outreach programmes looking at supervision ratios, staff numbers and costs per population. The third part of the publication proposes some alternative approaches to making outreach programmes more cost effective and outlines some advantages and disadvantages.

The main conclusions are that extension workers depend on: concentration on a small number of tasks; a reporting system concentrating on key tasks; regular, frequent home visits; focusing on selected clients where interventions can have maximum impact on reducing fertility and mortality; regular, frequent field supervision visits focused on support not inspection; regular, in-service training. There are many useful tips to be picked up from this experience in the agriculture sector.

Heggenhougen K, Vaughan P, Muhondwa E, Rutabanzibwa-Ngaiza J (1987) Community health workers: the Tanzanian experience. Oxford University Press; Oxford.

Tanzania started training CHWs in the 1960s, but this is the first time an account is available of all the different programmes in the country. This collaborative research study covered 344 CHWs (as well as other health

workers, villagers, political leaders) from 23 districts. Using a mix of research methodologies, valuable information was gleaned on existing CHWs, which was fed into the development of Tanzania's primary health care policy in the early 1980s. Chapters cover the CHWs and their communities, their own perceptions of themselves and their work, and the government health services perceptions of them. Most valuable are the vivid insights to the views and lives of CHWs, highlighted by descriptions of their villages and communities. The five example villages fill in the sort of detail that is all too often missing from studies on CHWs. There is a useful penultimate chapter which looks briefly at CHW programmes in other countries in Southern Africa. The final chapter sums up the Tanzania experience by broadening it into a discussion of critical issues that will be of relevance for other programmes. An annotated bibligraphy on Tanzania CHWs adds extra material to what is already a useful account of national experience.

Heggenhougen HK (1984) Will primary health care efforts be allowed to succeed? Social Science and Medicine **19 3; 217-224.**

In its broadest conceptualization, the primary health care approach demands some redistribution of resources which in the long term may threaten the political and economic status quo of a community. Any potential loss of influence of those in power is likely to be resisted or opposed. A PHC programme in Guatemala is cited as an example where PHC efforts resulted in violence towards community health workers because of the challenge to the local power structure. This example is compared to Tanzania where national policy is compatible with PHC principles and there is political commitment to the necessary reconstruction, despite difficult economic constraints on its implementation. It is concluded that there are more countries in the developing world which tend towards the Guatemalan rather than the Tanzanian political model, and therefore in these non-egalitarian societies much energy will be spent preventing real PHC efforts from succeeding.

Hongvivatana T, Sringeruyaung L, Cheungsatiansup K, Dejkhumwong S (1987) A study of alternatives to the PHC volunteer and community organization strategy. A final report. Centre for Health Policy Studies, Mahidol University, Thailand.

An excellent study which reviews all the evaluations done of the village health communicator (VHC) and village health volunteer (VHV) programme started in Thailand in 1977. It looks at attrition rates among VHCs in particular (they are very high, even within a year of training). In 1986 about 62% of VHCs throughout the country had either dropped out of the programme or from active service. Smaller villages have better results than larger villages. Attrition rates are lower (25%) for VHVs but their performance is poor. A large majority worked off and on (76%), and needed a big push from health workers. From this research it is concluded that the "PHC programme in general has been successful in only about 20-30% villages". The report looks analytically at factors affecting volunteer performance, exploring in some detail various aspects identified as important. The final section on proposed solutions is a down-to-earth list of policy suggestions which start with revisions of the health volunteer model: restricting the numbers of VHCs trained, and spending the money saved from having to train so many on other incentives for active volunteers. Paying volunteers is rejected, but per diems for attending bi-monthly meetings is seen to be feasible, and sound management. Only available at present from the authors, Mahidol, Nakorn Pathom 73170, Thailand.

Howell J (1982) Managing agricultural extension: the T and V system in practice. Discussion paper 8, Agricultural Administration Unit: Overseas Development Institute, London.

This paper begins by outlining the fundamental problems of agricultural extension work: the size and spread of the small farm sector; the quality and type of advice to be given and the calibre and performance of dispersed field staff. The author then continues by explaining how the T and V system addresses these problems. There are four main criticisms of the T and V system: it assumes that knowledge is all that is required for a change in

behaviour, and that knowledge needs no local adaptation; there is too much emphasis on crop production to the detriment of other, important, supportive services; the contact farmer approach can cut out other farmers from advice and service; the administration costs of the necessary re-organization are exorbitant. These criticisms are discussed, and the author concludes that despite the drawbacks it is a workable management system, but it needs adapting for different agricultural environments. This is a useful paper on the T and V system, about which Howell has written extensively. For those who wish to get a feel for the range of arguments about T & V, a collection of papers that covers many of the issues is available as a book. Edited by John Howell, called Training and visit extension in practice (1988) it is published by the Overseas Development Institute, London.

Hsiao W (1984) Transformation of health care in China. New England Journal of Medicine 310 14; 932-936.

China's recent shift from a collective agricultural production system to one that rewards farmers according to their individual output has caused major changes in the country's highly acclaimed rural co-operative medical system (Barefoot Doctors). The economic reforms have altered farmers' incentives, weakened community organization and lessened the central government's control over local communities. This has resulted in fewer barefoot doctors, a decrease in organized PHC, a decline in co-operative health insurance and an increased demand for higher quality health care. China's health needs are different from 30 years ago when the system was created and consequently that system must change to suit the new demands. Although this article looks at all the changes the new economic reforms have brought about, it focuses particularly on the problems of financing primary health care.

Jayarao KS and Patel AJ (1986) Under the lens. Medico Friend Circle and Voluntary Health Association of India, New Delhi.

A selection of short papers by many contributors provides, in this small volume, a mine of information about different aspects of health in India.

There are a number of chapters of particular relevance to CHW programmes: Jaju starts off by suggesting village health workers have glorified roles, that the ideal seldom becomes practice. For example, he doubts that most VHWs are acceptable to the majority of the villagers, and says that what is important is what benefits they can offer rather than whether they live in the village or not. Since most VHWs receive little support from the health team at the primary health centre, Jaju suggests communities will have little interest in them. Other chapters in this collection raise questions about health education, participation, about the 'mystique' of giving injections, and family planning which all have relevance to CHW programmes. It is easy to read, and although the chapters are uneven, it is lively and largely written by nationals involved in health issues.

Jobert B (1985) Populism and health policy: the case of community health volunteers in India. Social Science and Medicine **20 1; 1-28.**

This study examines the historical, political and bureaucratic influences that affected the formulation of the community health worker programme in India. It is a good example of a populist policy which aimed to redirect resources towards rural areas but took too little account of the different influences of dominant classes, and the bureaucracy. The author describes the decision making process and the implementation of the programme, tracing the changes that the plan underwent from being a community participatory policy to being one which in effect reinforces the existing hierarchical system. Focusing particularly on the selection and training of the CHWs, Jobert demonstrates how these influences have altered the original objectives and priorities of selection and training. This has also led to other distortions, such as curative care taking precedence over preventive care. This is an interesting paper because it looks at the political context within which the CHW programme was conceived and implemented.

Justice J (1986) Policies, plans and people. Berkeley, University of California Press.

Although this is a general overview of Nepal policy making in the health sector, chapter 3 is a case study of the attempt to introduce a community health volunteer programme during the 1970s. The National Planning Commission included in its sixth five year plan (1980 - 1985) the objective to train and place 30,000 community health volunteers during the period. The author traces the process of planning for this cadre, showing how strongly donor agencies and non-government, foreign advisors influenced the policy. As a result of intense pressure, the concept of community volunteers was seized upon with little real proof that it was viable. Volunteers were expected to do 6 hours of health motivation work each week but there was little consideration of the extent to which volunteers had the time for such work. Most were poor hill farmers. They were supervised by full-time village health workers who were supposed to do many of the same tasks, but who were paid 200 rupees per month. The health committees which were expected to support and assist volunteers seldom met. In subsequent chapters the author discusses the relationship between village health workers, volunteers and the peons, 'the invisible health workers', and makes salient points about the unrealistic expectations of central level planners. Well worth reading.

Justice J (1983) The invisible worker: the role of the peon in Nepal's Health Service. Social Science and Medicine 17 4; 967-970.

Health services are most effective when tailored to fit the needs of the population in question. However, when planning such services, those involved seldom examine the socio-cultural aspects of the community. As an example of this the author highlights the role of the peon in the Nepalese health services. Although paid only to carry messages, water and so on, many peons do far more, including diagnostic work, prescribing, treatment and referral. They are probably the only members of the health team who are actually from the community and are paid by the local panchayat. Peons are therefore probably closer to being real CHWs than the village health workers employed

by the government to do preventive work. The paradox is that although they are very real and important members of the health team from the community's point of view, they are invisible from the hierarchy in Kathmandu. In the light of this example the author concludes that planners and anthropologists should work together to recognize the role of the peon in the provision of a more effective health service.

Koplan JP, Hinman AR, Parker RL, Xou-Long G and Ming-Ding Y (1985) The Barefoot Doctor: Shanghai country revisited. American Journal of Public Health **75 7; 768-70.**

This is a fairly brief article updating the reader on the state of health care in Shanghai county in China. It gives an introduction to the more recent changes to the barefoot doctor scheme within one area, while recognising that these are not necessarily representative of national trends. There has been some diversification in the way the schemes are run with variations from place to place. There is now more emphasis on curative skills, reflected in the way certification is granted, although more weight is placed on preventive services in the monitoring of the system. Upgrading and higher qualifications are favoured. Supervision has also been improved. While there has been some concern over barefoot doctors leaving to go to jobs that pay more, barefoot doctors' salaries are linked to median farmer salaries in the study area so attrition has been minimal. Tension between the preventive and curative aspects continues, but the authors conclude that in Shanghai the system is adapting positively to the changing patterns of social political and economic structures, and should survive.

Leslie C (1985) What caused India's massive community health worker scheme: a sociology of knowledge. Social Science and Medicine **21 8; 923-930.**

After a brief description of the national CHW programme in India, the author considers the conflicting interpretations put on this programme at the time of implementation. It was introduced very quickly amid much opposition. Taking a rather personalized, anecdotal approach, tha author compares the

opinions of a number of well-known Indian specialists, such as Madan, Banerji and others. Asked why they thought the programme had been initiated, opinions ranged from questioning the sanity of the instigator, to suggesting that it was a medical placebo to sustain a system of exploitation. Certainly the scheme has had its difficulties, many of which are the result of poor planning and ignoring socio-cultural issues. The author describes how indigenous medical systems have been neglected, and that even now social and preventive medicine is regarded with disdain by the majority of the medical profession. With this historical legacy, it is suggested that change will be difficult. See Jobert for a similar policy approach to an analysis of the CHW programme.

MacCorquodale DW (1982) Primary health care in the Dominican Republic: a study of health worker effectiveness. Journal of Tropical Medicine and Hygiene 85; 251-254.

This brief study compares two groups of community health workers in the Dominican Republic, introduced as part of a basic health services programme in the south western part of the country in 1976. By 1978 1112 CHWs had received 3 weeks training and were working in their respective villages. They were responsible for 70 households, and their functions included immunizing children, providing oral contraceptives and condoms to interested couples, giving aspirin for fevers, oral rehydration for children with diarrhoea and iron to pregnant women. They also reported all births and deaths. For this study, 48 CHWs were selected randomly two years after the programme had started. An index of effectiveness was created for each CHW on the basis of his or her performance in immunization, and providing contraceptive services. By assigning values to the measures of effectiveness, it was possible to divide the CHWs into two groups, and compare the characteristics of the most effective with the characteristics of the least effective. Few differences were found between the groups: for example, male and female CHWs were equally effective in delivering contraceptive services. There was some indication that the more effective CHWs were more satisfied with their work. This paper is now somewhat out of date, and it is unclear what has happended to CHWs in the Dominican Republic.

According to UNICEF, since 1983 20,000 volunteers regularly give immunizations, among other things, in national health drives.

See State of the World's Children, UNICEF, New York, 1987.

Marchione TJ (1984) Evaluating primary health care and nutrition programmes in the context of national development. Social Science and Medicine 19 3; 225-235.

Jamaica's Community Health Aide (CHA) Programme dates back to 1978 when the pilot project in St James' parish (begun in 1972) was scaled up to cover the whole island. This paper evaluates the programme on 2 levels: at programme level and in the context of national development. The author emphasises the need to understand the societal and environmental context of the programme before the data from any study can be interpreted. He begins by briefly outlining the context of the programme in St James parish, looking at health and nutrition problems and primary health care.

Marchione describes two aspects of the evaluation. One which set out to determine how well the CHAs were deployed in relation to need, how well they performed their tasks, how they were received by the community and how well they were trained and supervised within the health team. Questionnaires were answered by 110 CHAs, their records perused, and a sample of 200 households interviewed in 1973. The results of this part of the evaluation are given, with the caveat that a central aspect of the programme is the political influence that parish councillors and party functionaries have had on the selection of CHAs. The other aspect of the evaluation was to assess the impact of the programme on mothers and their pre-school children. This showed only one change clearly attributable to the programme (attendance of mothers at family planning clinics). The final part of the paper considers the broader development and political context of Jamaica in order to understand the overall influences on the CHA programme. A useful detailed evaluation.

Marquez LR, Brownlee A, Molzan J, Reynolds J, and Seims LR (1987) Community health workers: a comparative analysis of Pricor-funded Studies. PRICOR, Maryland.

Thirty CHW projects, undertaken between 1981 and 1986, provide the basis for this publication. They formed part of an operations research programme focusing on CHWs as central to the primary health care approach. Rather than testing questions about the effectiveness of CHWs, the research projects concentrated on operational issues in order to support the delivery of PHC services. The publication includes a two-page summary of each project (12 in Latin-America or the Caribbean, 9 in Africa and 9 in Asia), and an extended review which makes some general observations on a number of specific issues: the role and tasks of CHWs, incentive for CHWs, selection, training and supervision of CHWs. The settings and institutional contexts of these projects vary, with most run by small, non-government organizations and just a few national large-scale examples. The authors emphasize that the research was done to solve local problems, and that generalizations must therefore be drawn cautiously. However, while it is certainly clear from their analysis that countries, and programmes within countries, differ widely, the conclusions they draw have relevance for many CHW programmes. Anyone interested in, or working with CHWs should find this a useful resource. The publication is available from PRICOR, Center for Human Services, 5530 Wisconsin Avenue, Chevy Chase, Maryland 20815, USA and costs US$5.00.

Maru RM (1983) The community health volunteer scheme in India - an Evaluation. Social Science and Medicine 17 19; 1477 - 1483.

On Gandhi's birthday in 1977 a new community health volunteer scheme was launched in order to bring PHC to the rural population of India. The scheme was evaluated in 1979 by a joint working party, one of whom was Maru. This article draws on the results of that evaluation and another smaller study conducted in Uttar Pradesh. Maru begins by giving a brief description of the scheme, and the evolution of PHC in India. From the 1960s until the mid 1970s, PHC consisted of a series of vertical programmes, but in 1975 the concept of the multi-purpose worker (MPW) was initiated. However, the MPWs

were not able either to cope with their workload or to involve communities, so in 1977 the additional cadre (the community health volunteer) came into being. The CHV was conceived not as a government employee, but as responsible and accountable to the community. The evaluation showed that CHVs were involved in predominantly curative work, and maternal and child health work was neglected. However, it also revealed that on the whole the CHVs were servicing all socio-economic groups. On investigating issues of control and remuneration, there seemed to be some uncertainty amongst communities. There were difficulties in mobilizing communities for public health tasks, and limited material support was available from them. But the majority felt the CHV was fulfilling a vital role. The author concludes that despite these problems, the scheme is bringing health care to the rural poor.

Meche H, Dibeya T and Bennett J (1984) The training and use of community health agents in Ethiopia. Ethiopian Journal of Health Development 1 1; 31-40.

Community health agents' training started in 1978 as a government response to Alma Ata. By 1984 4,218 had been trained but the attrition rate was 38%. This study focused particularly on the extent to which the community accepted responsibility for the cost of training CHAs and for arranging continuing remuneration, as well as on the effectiveness of health services' supervision. Training is for 3-4 months, in health centres and rural hospitals. A 1980 assessment of the programme showed selection of CHWs to be faulty (non-farmers and high school students were chosen); communities were not prepared to provide remuneration and there was a lack of supervision. CHAs serve 3 types of populations: i) peasant associations; ii) service cooperatives; iii) producer's cooperatives. Their population coverage and remuneration was shown to differ from one type of organization to another depending on the economic strength and level of organization of each community and the extent to which it was aware of its responsibilities vis-a-vis the CHA. A number of weaknesses were identified by the evaluation. Supply of drugs was haphazard; purposeful supervision was weak; and continuous education non-existent. Sustained support from communities was,

in general, lacking, resulting in a high drop-out rate. The authors conclude that all these elements need correcting if the programme is to be effective.

Moore M (1984) Institutional Development, the World Bank, and India's new agricultural extension programme. Journal of Development Studies 20 4; 303-317.

The World Bank has been responsible for the development and support of the "Training and Visit" system of agricultural extension, especially in India. This article is highly critical of the Bank's approach, arguing that it was ill-conceived from the outset and based on a failure to examine the real reasons behind the lack of success of previous systems. Furthermore the author suggests that the T and V system has been incompletely adapted, which in itself casts doubts on its appropriateness. It has proved to be very expensive and continues to support richer farmers. It has deprived extension workers of the most rewarding aspects of their job, namely organizing credit and arranging supplies, without providing an alternative service. No consideration has been given to socio-cultural issues. It is claimed that these factors, which have contributed to dissatisfaction and a very limited improvement in extension methods (if any), can in their turn be explained by the interests and politics of the major World Bank contributors. This is a lively, critical paper.

Moris JR (1983) Reforming agricultural extension and research services in Africa. Discussion paper 11, Agricultural Administrative Network, Overseas Development Institute, UK.

Although focused on the problems of agricultural extension, many issues are covered that have relevance for health. Having set the scene, the author looks at problems of middle management and field staff, asks whether T & V is the answer and makes some suggestions on how extension work could be reformed in Africa. For example Moris argues that extension staff should be downwardly accountable, so that field extension agents represent their communities rather than their employers. He points out that historically, in

the USA, this was sometimes achieved by having the local community contribute part of each extension agent's salary, although he admits this may not be feasible for peasants at subsistence level. This is a short, easy to read discussion paper, part of a series produced by the Overseas Development Institute. For those who want more, Moris has recently reviewed alternative forms of agricultural extension and their likely performance under tropical African conditions. Called Extension alternatives in tropical Africa (1988), this is available from the Overseas Development Institute, London.

Muzaale PJ and Leonard DK (1985) Kenya's experience with women's groups in agricultural extension: strategies for accelerating improvement in food production and nutritional awareness in Africa. Agricultural Administration 19 1; 13-28.

Bearing in mind the increasing number of female headed farming households in Kenya, women's groups are a potential focus for agricultural extension work. This paper describes a study of 44 women's groups, in 3 districts. The groups are described in terms of the way they developed and their relevance to agricultural extension. It was found that the social make-up of the groups tended to exclude the poorer members of the community. The possible impact of agricultural extension work on the groups is considered, taking into account the size and make-up of the groups, the role of supporting agencies, funding, and the sex of the extension agent. In conclusion it is suggested that there is a place for women's groups in extension work, although care must be taken to keep them representative. At the moment women extension workers concentrate on home economics and men on agriculture; the authors suggest that these differentiated roles are unnecessary and inappropriate in Kenya.

National Council for International Health (1987) The training and support of primary health care workers: proceedings of the 1987 international health conference, June 15-17. NCIH, 2121 Virginia Avenue NW, Suite 303, Washington.

This is a report from the 1987 conference which provided an opportunity for 62 people from very varied backgrounds and experiences to present short papers pertaining to training and support of health care workers. The papers are grouped into those covering: 1) training: selection, training methods and materials, teacher training, financing and ways of increasing effectiveness; 2) management, supervision and supervisory mechanisms, community participation and 3) support: drugs, equipment, vaccines etc. Some of the contributors ask important questions regarding PHC management, but few suggest possible answers or solutions. Several of the speakers recounted their own experiences in the field but all of these contributions are brief, so most are not able to explore the subject in any depth. The rationale for each area is covered from several viewpoints, yet little mention is made of either political considerations or socio-cultural expectations.

Nichter M (1986) The primary health centre as a social system: PHC, social status and the issue of team-work in South Asia. Social Science and Medicine 23 4; 347-355.

The central focus of this paper is the primary health centre, and the social relations within it. Nichter's thesis is that health programmes which do not pay credence to the professional identity and social status of health staff may well end in promoting conflict in the name of team-work and community participation. There may be considerable tension between professions. For example, Nichter observed in 2 south India primary health centres, that two or three medical officers restricted, or prohibited, their auxiliary nurse-midwife staff from administering even the simplest of curative or palliative medication, even though they had been trained to attend to medical emergencies. The medical officers explained that they were concerned that nurse-midwives should not become 'quacks' or be diverted from preventive tasks. Nichter suggests that actually their reasons were more economic-

disallowing competition, than symbolic or ethical. Many fascinating insights are given to the interaction between professionals, and the perceptions of the community as well as to particular conflicts engendered by, for example, the setting of targets. The Indian case study is compared with Sri Lanka, and the different issues of status and role integrity between public health nurses, family health workers (senior and junior) and health educators. An excellent paper that addresses important issues seldom considered.

Ofosu-Amaah V (1983) National Experience in the use of community health workers: A review of current issues and problems Offset Publication 71, World Health Organization, Geneva.

This was the first WHO document to draw together experience of national CHW programmes. It addresses many of the issues and problems facing those trying to implement community health worker programmes. It takes the areas for discussion in a logical sequence, examining the key concerns within each, and illustrating them with examples from case-studies. The author looks at tasks, selection, training, remuneration, career prospects, attrition rates and support services. Despite the magnitude of some of the problems this is an optimistic report, possibly reflecting the fact that some of the information from individual countries is based more on plans or theory than practice. Nowhere is the question of political constraints/issues addressed. In the concluding observations the author indicates that major areas of concern include - organizational support and planning; involvement of the community; education of all concerned regarding health as an element of overall development. She also mentions areas about which little is known (eg attrition rates) and emphasises the need for more sharing of experiences and communication.

Osborne C (1983) Community health workers in Zambia. Unpublished report, PHC Secretariat, Ministry of Health, Government of Zambia.

From 1978 to 1983 1,113 volunteer community health workers (CHWs) were trained in all parts of Zambia. This document looks at various aspects of

the CHW programme particularly from the point of view of implementation. It begins by outlining the PHC programme in Zambia following the Declaration of Alma Ata, and then focuses on the CHW in Zambia, mentioning briefly the selection criteria, training and provision of equipment. The author continues by describing the evaluation methodology used: questionnaires to district PHC co-ordinators, visits to CHWs, training centres etc. The results are briefly summarized (with tables giving quantifiable data at the end of the report) and comments made on findings regarding training, transport and other constraints on the CHW. The results are then discussed and 42 separate recommendations are made. Although most aspects of implementation are covered, the problem areas (training, supervision, transport/equipment/supplies, remuneration) are given closer scrutiny. The report does not look at the tasks or job description of the CHW, nor does it consider attrition rates, although it does recommend analysis of the latter. Performance assessments were subjective.

Owuor-Omondi L, Atlholang D, Diseko R (1986) The changing role of family welfare educators: an evaluation of the role of FWEs in the implementation of primary health care in Botswana. National health status evaluation, monograph series 1. Ministry of Health, Botswana.

This study identifies the family welfare educator (FWE) as an important peripheral health worker, whose role as "motivator and behaviour change agent" has been diverted to an increasingly curative one. The finding came out of a study of 66 FWEs (out of 547 trained at that time) working in different regions of the country. Mostly mature women, FWEs are supposed to be selected by their communities for the 3-month training. In fact, the research showed that nearly half the FWEs were self-selected. It was assumed that FWEs spent 50% of their time home-visiting but in practice most of their time was spent in clinics, although many of their tasks within clinics were preventive (ante-natal and post-natal clinics and so on). One of the main findings of the study, repeating those of other studies, was that support and supervision was limited with FWEs often uncertain as to who should be supervising them. The report makes a number of recommendations to policy makers to strengthen the community role of the FWEs.

Parsons L (1982) Aid Posts in Enga Province. Papua New Guinea Medical Journal 25 3; 173-175.

Although by no means an in-depth analysis of Aid Post Orderlies (APOs) in Papua New Guinea, this is quite a good, brief introduction to some of the issues surrounding the use of APOs in one province. While 20% of the Aid Posts were unstaffed and a further 31% were staffed by APOs who had been in post less than a year, the author concludes that 50% of the provincial APOs were providing a satisfactory service. Despite all of them being from Enga, which has only one language group, there have been problems with tribal warfare, isolation and unpopular communities which lead to instability and a high APO turnover rate. During 1979 and 1980 all the APOs were visited, and assessment made of the standard of care. Problems identified included supervision and motivation, and the author suggests that older, experienced APOs should be retrained rather than concentrating on the new, younger ones. The training is briefly described, as is the popular in-service training. The author emphasises the need to bear in mind the cultural considerations of programme implementation.

Quadeer I (1985) Social dynamics of health care: the community health workers scheme in Shahdol district. Socialist Health Review September, 74-83.

This article examines the impact of the rural social and economic realities of the CHW programme in one district in Madhya Pradesh, some five years after it was introduced. The research focused on the social and economic stratification of the rural population, the links CHWs had with different strata, links between strata (which indirectly influenced the behaviour of its members) and links with health services personnel. Surveys were conducted in 34 villages, covering 3743 households. An intensive 1-2 month study was carried out in 6 selected villages. Quadeer describes vividly the strong inter-class differences, not only between the poor and the elite, but between petty traders, officials and professionals. CHWs were mostly from the Brahmin and Thakurs (non-tribal people) although 60 percent of those surveyed were of scheduled tribes or castes. Despite a scarcity of

employment opportunity, the CHWs had managed to acquire multiple jobs (a few were also farmers). Community opinions of the CHW differed from village to village and from class to class. Most agreed CHWs were working less than they had at the beginning. Quadeer concludes CHWs were themselves selected through patronage and therefore tended to ignore the poor, concentrated on curative tasks, and were treated with contempt by health professionals. This is a fascinating description of the complexity of social relationships that most CHW programmes ignore.

Ramprasad V (1985) Community Health Worker: Critique of an experience. Report of the study on the Community Health Programmes funded by Oxfam (India) Trust, Bangalore.

Oxfam has in the past funded numerous community health worker programmes in India. This is an evaluation of ten, in South India. During visits to the programmes Ramprasad found that although there were some good points to most of them, there were also some fundamental defects. The report begins with the concept of community health workers (CHWs) and outlines both the initial terms of reference and the eventual objectives of the evaluation. Ramprasad focuses on the evolution of the projects, an unusual aspect in evaluation. An important finding was the dichotomy between reality and theory, the implications of which strongly influenced the programme. The CHW package as sponsored by Oxfam was often accepted in total as a way of ensuring continued project funding. However, because it was not in response to felt community needs the whole philosophy behind the CHW programme was not understood or internalized by the community, leading to conflicting expectations. In most cases the personnel for training and supervision were ill-equipped for the task and inadequate in numbers. The author briefly summarizes the findings under the headings of role, selection, training (including training materials), evaluation and follow up of CHWs. Recommendations are made to Oxfam regarding future policy on funding, with guidelines for selection of projects. The 10 projects studied are summarized at the end, and tables give profiles of the projects and the participatory components of 9 of them. This is one of the more lively and interesting evaluations available.

Rosenthal MM and Greiner JR (1982) The barefoot doctors of China: from political creation to professionalization. Human Organization 41 4; 330-341.

In June 1965 Mao announced his new barefoot doctor policy. Recently, however, this policy has undergone some changes. Against the background of visits to China and study of the literature, this article looks at the way the policy has evolved. It begins with a historical description, looking at the original plan, its purposes and political implications. Details of the original plan are outlined, covering areas of selection, training, remuneration and tasks to be performed. In 1979, changes were introduced: barefoot doctors were allowed to be "upgraded"; although initially there was an inherent contradiction in that they were also to continue part-time and in agricultural work. Two levels of bare-foot doctor were introduced: the original preventive health worker and "assistant doctors". By 1981 moves were made to consider paying barefoot doctors a fee-for-service, with full-time clinical work. Continuing education has been developed and the differentiation has begun, though at the time of this paper it was still in its early stages. This is one of several papers which mark the change in China's policy towards professionalizing their barefoot doctors.

Schaeffer M and Reynolds J (1985) Operations Research Issues: Community Health Workers. Pricor Monograph Series. Issues Paper 2, Centre for Human Services, Maryland.

This document is in three parts. The first outlines the role of Community Health Workers (CHWs) and introduces the issues that must be addressed when considering programme implementation. Chapter 2 takes each issue in turn, looking at the decisions required and the possible constraints and influences on that decision. Chapter 3 explains how to design an operations research study to analyse the problems, and to develop and test possible solutions. Although the first two chapters are reasonable, the third chapter on research methodology is probably of limited use in a practical field situation.

Scholl EA (1985) An assessment of Community Health Workers in Nicaragua. Social Science and Medicine 20 3; 207-214.

Shortly after the overthrow of the Samoza government the new Sandinista government pledged its commitment to providing health for all. The health service was nationalized (although private health care continued), and by 1983 more people had access to health care and infant mortality rates had dropped. This paper is the result of 3 months spent studying the PHC system and the role of the brigadistas in Nicaragua. The author visited 2 areas (chosen by the government) to learn about the brigadistas. He describes their selection, training and work. They work voluntarily, motivated by a desire to support the revolution, and political/social teaching in the community is as much a part of their work as are their simple curative tasks. However, in spite of this conception of their role, the author found that the brigadistas are more an extension of traditional clinic based services than true community health workers. Although often originally chosen by the community they work mostly in clinics where their role appeared to be primarily that of nurse auxiliary extenders. In 1983 the government introduced six different types of brigadistas and planned eventually to phase out the curative element of their work while still placing much emphasis on the importance of training doctors and nurses. The author concludes by suggesting that this move is unwise, that brigadistas are necessary especially for the rural areas but that many changes to the programme (in terms of training, referral, job descriptions and remuneration) need discussion. This is a subjective account, now a little out of date given Nicaragua's fast-changing situation, but nonetheless it makes some interesting points.

Skeet M (1984) Community health workers: promoters or inhibitors of primary health care? World Health Forum 5 4; 291-295.

Community involvement is supposed to be a component common to all PHC programmes. However, the author argues it is usually limited, involving the selection of one villager to be a health worker, because PHC is not fully accepted at national level. The community health worker should be a bridge,

but if either side is weak the bridge collapses. The first step is for local communities to organize their own local development programmes, and once health needs and priorities have been recognized a suitable programme can be devised. If a programme is imposed from above it is often impracticable and daunting. Skeet criticially examines the selection of CHWs, teaching, incentives and rewards, and promotion prospects and support. She concludes by suggesting that the failure to take these issues seriously will mean that CHWs fail to provide effective care, in turn leading to a loss of credibility for PHC. The argument is based on the existence of many poorly trained, ill-equipped and unsupervised CHWs. Working in isolation from other essential components of PHC not only will they be ineffective but also, positively harmful.

Stark R (1985) Lay workers in primary health care: victims in the process of social transformation. Social Science and Medicine 20 3; 269-275.

In the wake of reports from several countries where primary health care workers (PHCW) have been the victims of violence, the author argues that delivering PHC is inevitably a complex political act to which tangible risks are attached. PHCWs represent a major strategy for providing Health for All by the year 2000 but PHC implies social change, and thus PHCWs are implicated as agents (knowingly or unknowingly) of this change. They may be political functionaries in several ways. First, they represent a shift in power; secondly, and conversely, they may be used by the government (possibly with international backing) to control or "maintain links with" politically volatile areas. Thirdly, if they are involved in collecting data about the community this could be used to infiltrate, gain or maintain political/ military control over an area. Thus PHCWs potentially can be used as spies. This is also applicable to ex-patriate workers. The author points out that this does not only apply to PHCWs who have been trained to look at the political angle of health problems but eventually to all good health workers. Even government PHC workers may be at risk - their role as healers in the community gives them status and influence, and thus makes them potential targets.

Stevens H (1980) Problems of agricultural extension in Africa. Training for agricultural and rural development. Economic and Social Development Series no 21, Food and Agricultural Organization, Rome.

Comparing agricultural extension work in Anglophone and Francophone West Africa, the author goes back to the historical differences that have developed from different colonialists in attitudes towards agricultural extension and in organizational structure. He argues that the emphasis the UK places on food production leads to a system that, although very technically orientated, is in many ways more suited to Africa's needs. The French system on the other hand, is not geared to good quantity production but to production at competitive rates, and is therefore more people oriented. Differences and similarities in training are reviewed and the author concludes that in content the two are much the same, but with differing emphasis. There is a brief discussion about the problems of deciding who to train, and Stevens suggests that the better educated are more appropriate for the more high-powered system which is developing. The three main conclusions are: first, problems of economic instability will occur if crop production is increased; second, there is a need for more co-ordination between levels of agricultural extension personnel and finally, unsurprisingly, there is a need for more communication and discussion between the ex-English and ex-French colonies.

Sudsukh V (1982) Report on Interregional study on community health workers, Ministry of Public Health, Thailand.

Thailand has village health volunteers (VHV) and village health communicators (VHC) who are selected by, work for and live in, the community. They are not paid. This study was carried out by the Ministry of Public Health, and looked at three components of the programme: the relationship between VHVs, VHCs and their communities, VHV/VHC training, and follow up support of their activities. Random samples included 99 villages, 99 VHVs and 192 VHCs. The report of the study is open about the faults in the programme: for example, it found that the village level organizations to support VHVs and VHCs are

weak or non-existent, and that the community has a limited understanding of the role of the VHVs and VHCs. On the whole, VHVs and VHCs were relatively inactive. The training programme, on the other hand, was well-prepared, (particularly the self-learning modules) although training at local level was not always effective. About 50 percent of VHVs and VHCs reported that what they had learned was of limited use. Finally, follow up support of field activities, from both the health services and the community, was extremely limited. Based on the weaknesses identified, the authors make a number of recommendations to strengthen the system.

Twumasi PA and Freund PJ (1985) Local politicization of primary health care as an instrument for development: A case study of community health workers in Zambia. Social Science and Medicine 20 10; 1073-1080.

Accepting the fact that PHC requires a major distribution of resources and power, this article argues that the success of PHC depends on the provision of a local organizational framework which has the support of both the local power elite and the population. The authors look particularly at the situation in Zambia. They describe the background to a government/UNICEF-backed project, the local and district political and administrative structure and the health facilities therein. A case history of a CHW who came up against considerable problems because of differences between the local power holders is used to illustrate the importance politics has in primary health care. The authors argue that had a village development committee been set up incorporating all leaders, both traditional and elected, the problems would not have arisen. However, for such committees to function effectively other changes are necessary: decentralization of power, community participation and financing.

Vaughan JP and Walt G (1983) Village health workers and primary health care. Tropical Doctor 13; 105-108.

This is an introductory outline to some of the basic concerns inherent in community health worker programmes. The article begins by giving the

background to the concept and the rationale behind the inclusion of CHW programmes in many national PHC plans. While the rationale remains valid, the implementation of such programmes is not as straightforward as originally assumed. Some of the current issues surrounding common policy decisions are discussed briefly: remuneration - should the CHW be full or part time? Mono or multi-purpose? What tasks should they undertake? Who should be responsible for selection, and using what criteria? What sort of training should they have and how should they be supervised? What career opportunities should be provided? The paper concludes by emphasizing that the key to the success of CHW programmes lies in the delicate relationship between the community and the health services.

Werner D (1981) The village health worker: lackey or liberator. World Health Forum 2 1; 46-68.

The now famous conceptualization of Werner's view of vilage health workers as lackeys or liberators is based on his experience in Latin America, both from Mexico and from visits to rural health projects in different countries which involved people in their own health care. He characterized these programmes as community-supportive or community-oppressive: the first being those which favourably influenced the long-range welfare by building on human dignity; the second being those which pay lip-service to such ideals but, in fact, encourage dependency and servility. The paper defines what Werner means by a village health worker, by comparing him or her with medical professionals, placing them firmly within the political context.

A Round Table discussion follows Werner's paper.

World Health Organization (1980) Primary health care: the community health worker. Unpublished report on a UNICEF/WHO Inter-regional study and workshop (Kingston, Jamaica). PHC/80.2., WHO, Geneva.

This was the first inter-regional workshop on CHWs. It was attended by representatives from: Botswana, Bulgaria, China, Ethiopia, Honduras, India,

Iran, Jamaica, Papua New Guinea, the Philippines, the Sudan, Thailand and Turkey. The report draws on the experiences of the programmes in all these countries, and gives a list of guidelines for the use of CHWs. The following issues were discussed: the CHW's relationship with the community; functions, training and support; arrangements for drugs and supplies; referral facilities and finances. The programmes of the countries represented developed from different sources and in different ways, making comparison is difficult. Particular areas of concern are: inadquate consideration of the need for evaluation; the lack of baseline data for comparison or any mechanism for realistic evaluation. The relationship of the CHW with the community and the responsibilities involved in community motivation needs further investigation. The paper includes tables comparing the various programmes, but there is little discussion on how much the theory differed from reality.

World Health Organization (1984) Inter-regional study on community health workers. Unpublished report of the WHO Inter-regional study and workshop 4-8 July 1983, Manila, Philippines. SHS/HMO/84.1, WHO, Geneva.

As a follow-up to the "Jamaica workshop" in 1980 a second inter-regional study examined further some of the key issues concerned with CHW programmes. In particular, the relationship with the community, training and support. The report presents a summary of the discussions and the major recommendations that derived from them. Considerable time was spent discussing community involvement, in view of the increasing financial constraints on CHW programmes. Other areas of debate were CHW roles and functions, training and supervision. It is clear that much has been learned since the previous inter-regional workshop in Jamaica, and that countries are now beginning to look at the realities and difficulties of implementing an effective CHW programme. The report includes several tables giving the job descriptions, support groups, training and supervision of CHWs.

World Health Organization (1986) Community health workers Report on an African Regional Seminar, Douala, Cameroon 9-14 June 1986. Paper AFR/PHA/226, Brazzaville.

Representatives from 14 African countries attended a seminar in Douala, Cameroon, in 1986 to discuss the place of community-based health workers and to exchange information. This short report summarises some of the discussion, and includes two brief reports from Mali and Zimbabwe on aspects of their CHW programmes.

World Health Organization (1987) Community health workers: pillars for health for all. Unpublished report of the inter-regional conference, Yaounde, Cameroon 1-5 December 1986. Paper SHS/CIH/87.2., WHO, Geneva.

This is a report on an inter-regional meeting organized jointly by the Japan Shipbuilding Industry Foundation and WHO, and hosted by the government of Cameroon, to which 15 countries made reports about their CHW programmes. The report is arranged around four major themes, each of which is discussed in the light of countries' experiences. The first theme is the context and characteristics of an effective district health system; the second, the promotion of health and specific health care inteventions by CHWs; the third, mobilization of communities and the fourth, selection, training supervision and working conditions of CHWs. This is a useful document because it gives up to date information on CHW programmes (including China) but some of the country reports are still surprisingly prescriptive, with few details on how CHW programmes are actually working. There is an annex with short reports from the following countries: Burkina Faso, Burundi, Cameroon, China, (quite a substantial report), Costa Rica, India, Indonesia, Jamaica, Mozambique, Nigeria, Philippines, Sudan, Thailand, Zaire and Zimbabwe.

World Health Organization (1987) Working document for the WHO Study Group. Unpublished background paper produced for a Study Group meeting held in Geneva 2-9 December 1987.

This fifty page paper reviews the position of CHWs around the world, and provides the most detailed overview currently available, drawing on small scale and large-scale programmes. There are three main sections: the first considers CHWs in the context of primary health care at the district level, looking at the links with the community, other healing systems and the primary health care services in terms of supervision, support, continuing education, supplies and so on. The second section looks at key issues in CHW programmes: what functions they can or should perform, patterns of financing CHWs, hours of work, population served, and so on. The third explores the difficulties of monitoring and evaluating CHW programmes. The concluding pages on the implications for future practice are cautious, seeing CHWs as effective agents of health improvement, but under special circumstances. This paper should be available in 1988 or 1989 as part of a larger policy statement from WHO.

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de Zoysa I and Cole-King S (1983) Remuneration of the community health worker: what are the options? World Health Forum 4 2; 125-130.

There are three basic ways to solve the question of CHW remuneration: volunteer service, community support and external funding. This article looks at the arguments for and against each alternative, summarizing them as a guide to policy-makers. Volunteers are cheap and although motivation often comes from some sort of commitment, other reasons behind voluntarism have to be considered. There are high drop-out rates in volunteer programmes, making planning difficult and increasing training costs. It is important to ask if volunteers are being exploited and whether it is right to demand that CHWs work voluntarily when health professionals are salaried. Community support, be it by insurance schemes (which require organization), fee for service (which can exclude the poor) or co-operatives (which do not bring in a regular income) has its drawbacks, despite appearing ideologically sound because it makes CHWs accountable to the community. External funding from

government is often more dependable, but the inclusion of CHWs into government service requires career and pay structures which draws them away from the communities. It can also threaten the health professionals, but makes supervision easier. Non-government organization (NGO) funding is not usually available indefinitely, and the experience of handovers from NGO to local funding are not encouraging. The authors suggest that shared responsibility may be the answer, strengthening the link with the community. It should be looked at within the context of the population to be served, the existing health services and the tasks and time of the CHW. For CHWs to be effective there needs to be a strong relationship between them and both the community and the health services. Finally the authors emphasise that PHC is not a cheap alternative: it is a more effective and equitable way of using existing resources. This is an excellent paper that puts the options succinctly.

Author Index

Country Index

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